



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

भारत के बीसवीं विद्युत शक्ति सर्वेक्षण की रिपोर्ट (भाग - एक)

REPORT ON TWENTIETH ELECTRIC POWER SURVEY OF INDIA  
(VOLUME-I)



नई दिल्ली  
New Delhi

नवम्बर - 2022  
November - 2022

घनश्याम प्रसाद  
अध्यक्ष तथा पदेन सचिव भारत सरकार  
**GHANSHYAM PRASAD**  
Chairperson & Ex-officio Secretary  
To the Government Of India



केन्द्रीय विद्युत प्राधिकरण  
भारत सरकार  
विद्युत मंत्रालय  
सेवा भवन, आर,के, पुरम  
नई दिल्ली-110066  
**Central Electricity Authority**  
Ministry of Power  
Sewa Bhawan, R. K. Puram  
New Delhi-110066

## FOREWORD

India has great potential for renewables which has been recognized and a goal for attaining 500GW has been set by year 2030. To achieve the goal of integration of such high level of renewables there are both technical and financial challenges. The Electrical Energy is one of the basic necessities for the development of a country. The reliable and uninterrupted power supply for everyone could be ensured only through appropriate planning of adequate generation capacity and commensurate transmission & distribution infrastructure that has been a primary activity of CEA since its inception. As all such planning activities start with a realistic assessment of future power demand, CEA also conducts Electric Power Survey (EPS) of the country every five years for estimating the electricity demand of the country for medium and long term periods. The report of the first EPS was published in 1963 and since then, nineteen EPSs have been conducted. The report of the 19th EPS was published in January 2017.

To reassess the electricity demand of the country, the 20th Electric Power Survey Committee was constituted by CEA in May, 2020 under the chairmanship of Chairperson, CEA and having representations from various related Ministries, NITI Aayog, CPSUs, Transco's & Electricity Departments of States/UT's among others. The mandate of the Committee was to forecast year-wise electricity demand for all the Discoms/States/UT's/Regions and for the country for the years 2021-22 to 2031-32 and perspective electricity demand projections for the years 2036-37 and 2041-42.

Under the guidance of the 20th EPS Committee, the power demand assessment has been done through the tried and true Partial End Use Method (PEUM) which is essentially a bottom up approach based on time series analysis of end user consumption data. All the emerging factors having possible impacts on power demand such as production of green hydrogen, penetration of electric vehicles, roof-top solar, solar pumps etc. have appropriately been factored in the electricity demand forecast. For the first time, the electricity demand forecast exercise has been carried out under two scenarios (Optimistic and Moderate) that, I sincerely hope, would be quite useful for investors and planners in formulating their future strategies. The forecasts have been prepared in consultation with all the concerned power utilities and with mutual consensus.

I wish to express my sincere thanks to all the members of the 20th EPS Committee and eminent experts who gave their wholehearted support and valuable suggestions in conducting the power survey, especially in the view of the fact that the forecasting exercise was quite challenging this time due to COVID-19 disruptions and increasing share of renewable sources in the overall energy mix, which is altering the traditional demand pattern. I am sure that the electricity demand forecast of the 20th EPS would be immensely helpful to all the stakeholders of the power sector in the proper planning of electrical infrastructure and power procurement so that an optimum balance between energy security and capital investment could be achieved.

  
(Ghanshyam Prasad)



**A. Balan**  
**Member (Planning)**  
**Central Electricity Authority**

### ***Preface***

India has one of the largest and most complex power sectors in the world. Forecast of electricity demand is an important exercise for power procurement planning and investment in the power sector. A fairly accurate electricity demand projection is very important in planning as it ensures the availability of supply of electricity, as well as provides the means of avoiding over and under-utilization of capital assets.

The 20<sup>th</sup> Electric Power Survey covers Discom/State/Union Territory/Region wise and all-India electricity demand projection for the next 20 years viz. year-wise projections from 2021-22 to 2031-32 and perspective electricity demand projection for the years 2036-37 and 2041-42. For each Discom, electricity demand projection has been done separately for different consumer categories viz. domestic, commercial, irrigation, industries, public water works, public lighting, Railways etc. The electricity demand forecast in this report is estimated under two scenarios i.e. optimistic scenario and moderate scenario. The optimistic scenario is based on the complete achievement of targets set by the government for various planned initiatives having potential to impact power demand of the country such as National Hydrogen Mission while the moderate scenario is based on lesser realization of the government targets in view of constraints that may appear due to unpredictability associated with real life.

I wish to express my profound gratitude to all the members of the 20<sup>th</sup> Electric Power Survey Committee and eminent experts for their active participation and valuable suggestions during the brainstorming session and deliberations of the Committee. I would also like to place on record the valuable support and co-operation extended by the nodal officers of Transco's, Discom's and Electricity Departments of States/UT's in coordinating the voluminous input data and in preparation of the Report. I would especially like to acknowledge the contribution of Sh. Narendra Singh, Chief Engineer, PS&LF, CEA, who has given the conceptual guidance and coordinated the efforts of the utilities and officers & staff of Power Survey & Load Forecasting Division, CEA, in formulating the entire Report.

I am grateful to Shri Prakash S Mhaske, the then Chairperson, CEA, under whose guidance the work of 20<sup>th</sup> EPS was taken up. I sincerely acknowledge the support received from the then Chairperson, CEA Sh. Dinesh Chandra and then Chairperson (I/C), CEA Sh. B.K. Arya during the interim period of report preparation. I take this opportunity to thank Shri Ghanshyam Prasad, Chairperson, CEA and Chairman of 20<sup>th</sup> Electric Power Survey Committee for his valuable suggestions and guidance in finalizing the Report.

November, 2022

  
(A. Balan)



**Narender Singh**  
**Chief Engineer (PS&LF)**  
**Central Electricity Authority**

**Acknowledgement**

The report of 20<sup>th</sup> EPS has been brought out in fulfilment of CEA's obligation under Section 73(A) of the Electricity Act 2003.

This Report covers the electricity demand projection for 73 Discom's/Electricity departments, 36 States/UTs, 5 Regions and for the country. Partial End Use Methodology (PEUM), which is a combination of time series analysis and End Use Method, has been used for electricity demand forecast. Detailed discussions were held with officers of each Discoms/State Electricity Departments/ Transmission Companies of States/UTs to understand their various specific issues and future planning. Impact of various initiatives of Government of India which would affect the electricity demand viz. T&D loss reduction, installation of roof top solar, penetration of electric vehicles, National Hydrogen Energy Mission, PM KUSUM Yojna etc. were also deliberated upon and appropriately factored in the demand estimation.

I would like to place on record my sincere thanks to all the eminent members of 20<sup>th</sup> EPS Committee, officers of Discom's/ Transco's of the States and Electricity Departments for their active participation and valuable suggestions during meetings of the EPS Committee and subsequent meetings/consultations for finalization of the Report. The guidance provided by the earlier Chairperson Shri PS Mhaske and the then Member (Planning) Shri Sandesh Sharma helped greatly in preparation of the report. I am thankful to the present Chairperson, CEA, Shri Ghanshyam Prasad, and present Member (Planning), CEA, Shri A. Balan, for their valuable guidance in finalisation of this Report.

The in depth deliberation was made possible by the base work done by Power Survey and Load Forecasting Division. The contribution made by the Officers & staff of PS&LF Division, CEA and Regional Power Survey Offices in preparation of report and their vigorous efforts for collecting the requisite data from various State utilities/ Distribution Companies is well appreciated and acknowledged with thanks.

*Narender Singh*

(Narender Singh)

November 2022

## Table of Contents

Chapter No.	Particulars	Page No.
i.	Forward	1
ii.	Preface	2
iii.	Acknowledgment	3
iv.	Executive Summary	5-15
1.	Chapter 1: Introduction and Methodology	16-30
2.	Chapter 2: All India, State/UT/Discom Wise Power Demand Forecast (2021-22 to 2031-32)	31-51
3.	Chapter 3: Review of 19 <sup>th</sup> EPS Projections vis-a-vis Actual Achievement	52-57
4.	Chapter 4: Category Wise Projection of Electricity Demand on All-India & Regional Basis (2021-22 to 2031-32)	58-74
5.	Chapter 5: Category Wise Electricity Demand Projection for Discoms, States & UTs (2021-22 and 2031-32)	75-165
6.	Chapter 6: Perspective Electricity Demand Projection (2036-37 and 2041-42)	166-172
7.	Chapter 7: Electricity Demand Projection inclusive of Captive Power Plants & Solar Roof Top	173-180
8.	Chapter 8: Electricity Demand Forecast (Moderate Scenario)	181-187
<b>Appendix I</b>	Order of 20 <sup>th</sup> Electric Power Survey Committee.	188-190
<b>Appendix II</b>	Order of Sub Committee Constituted for assessing impact of Covid on power demand.	191
<b>Appendix III</b>	Order of Sub Committee Constituted for assessing impact of renewable penetration on power demand.	192
<b>Appendix IV</b>	Order of Sub Committee Constituted for finalizing methodologies for peak demand forecast.	193

## Executive Summary

### Introduction

Projection of electricity demand is a prerequisite for power sector planning. Therefore, periodic Electric Power Survey (EPS) of the country is conducted by Central Electricity Authority (CEA) to assess the State wise/Union Territory wise/Region wise and all-India electricity demand on medium and long term basis. So far, nineteen EPSs have been conducted. Volume 1 of 19<sup>th</sup> EPS report, the last in the series, covering the year-wise electricity demand projection for each Discom/State/ UT/ Region and all-India in detail for the years 2016-17 to 2026-27 as well as the perspective electricity demand for the year 2031-32 and 2036-37 through Partial End Use Method (PEUM) was published in January, 2017. Volume II & Volume III of 19<sup>th</sup> EPS covered the electricity demand forecast of the National Capital Region (NCR) & Mega Cities respectively. The fourth volume covered the electricity demand forecast of the country through econometric method.

To reassess the electricity demand, the 20<sup>th</sup> Electric Power Survey Committee (EPSC) was constituted by CEA in May, 2020. Based on the way forward suggested by the EPSC, Electricity demand projections have been done for Discoms/States/UTs/Regions and for the country through PEUM for the years 2021-22 to 2031-32. For each Discom, electricity demand projection has been done separately for different consumer categories viz. domestic, commercial, irrigation, industries, public water works, public lighting, Railways etc. Perspective electricity demand projection has also been done for the States/UT's/Regions and for the country for the years 2036-37 and 2041-42. Factors like reduction in transmission & distribution losses, energy efficiency improvement measures, production of green hydrogen, penetration of electric vehicles, roof-top solar, solar pumps etc. have appropriately been factored in the electricity demand forecast.

The forecast has been prepared in consultation with all the concerned power utilities and with mutual consensus.

### Methodology

Partial End Use Methodology (PEUM), which is a combination of time series analysis and End Use Method, has been used for earlier Electric Power Surveys by CEA. As suggested by 20<sup>th</sup> EPSC, PEUM has been used to project power demand of the country for this edition also.

PEUM is a “bottom-up” approach focused on end-uses or final energy needs of a user. Under this method, time series analysis has been done to derive growth indicators giving higher weightage to the recent trends so as to consider the benefits of energy conservation initiatives and technological changes. It has been observed that the behaviours of individual consumers differ drastically because of various factors. However, their behaviours are found consistent once aggregated to a certain level as such groupings cancel out the anomalies associated with any particular user. Therefore, electricity demand projection has been done for various categories of electricity consumers such as Domestic, Commercial, Irrigation, Industrial etc. As analysis was done on grouping end users under various categories and not on each end user individually, it is termed as “Partial End Use Method”.

Apart from general growth trends assessed from the past data, the likely impacts of various emerging aspects and government initiatives/policies such as energy efficiency measures, penetration of electric vehicles, solar roof top, National Hydrogen Mission, PM KUSUM Yojna etc. have also been factored in while assessing the electricity demand in future.

**Exclusions:**

The Electric Power Survey Report covers electricity demand projection for the utility system only. The projections do not include the portion of electricity demand of industries and other consumers that would be met from their internal resources locally such as captive power plants and solar roof tops. However, the power demand forecast including the demand met from CPPs and solar roof tops is given separately in Chapter 7.

**Overview of Electricity Demand Forecast**

**Electricity demand projections from 2021-22 to 2031-32 on all-India basis**

The electrical energy consumption, T&D losses, electrical energy requirement, peak electricity demand and load factor for the years 2021-22, 2026-27 and 2031-32 on all India basis are summarized in Table 1.

Table 1 - Electrical energy consumption, T&amp;D losses, electrical energy requirement and peak electricity demand for the years 2021-22, 2026-27 and 2031-32 on all-India basis

Particulars	Year			CAGR (in %)	
	2021-22	2026-27	2031-32	2021-22 to 2026-27	2026-27 to 2031-32
Total Energy Consumption - MU	11,38,408	16,10,053	21,33,380	7.18	5.79
T&D losses –MU	2,43,237	2,97,782	3,40,396		
T&D losses (Ex- Bus) - %	17.60	15.61	13.76		
Energy Requirement (Ex-Bus) - MU	13,81,646	19,07,835	24,73,776	6.67	5.33
Annual Load Factor - %	77.65	78.57	77.07		
Peak Demand (Ex-Bus) – MW	2,03,115	2,77,201	3,66,393	6.42	5.74

As observed from the above table, the percentage increase in electrical energy requirement is less than the increase in electricity consumption. It is because of reduction in T&D losses expected in future.

### Region-wise electricity demand projection (2021-22 to 2031-32):

The region-wise summary of electrical energy requirement and peak electricity demand for the years 2021-22, 2026-27 and 2031-32 is given in Table 2.

Table 2: Summary of region-wise electrical energy requirement &amp; peak electricity demand for the years 2021-22, 2026-27 and 2031-32

Region	Energy Requirement (in MU)			Peak Demand (in MW)		
	2021-22	2026-27	2031-32	2021-22	2026-27	2031-32
Northern Region	4,18,188	5,92,312	7,73,545	73,367	97,898	1,27,553
Western Region	4,28,994	5,96,793	7,63,198	65,437	89,457	1,14,766
Southern Region	3,51,611	4,60,853	5,96,557	61,165	80,864	1,07,259
Eastern Region	1,64,542	2,32,971	3,08,103	26,043	37,265	50,420
North Eastern Region	18,312	24,904	32,373	3,437	4,855	6,519
All India	13,81,646	19,07,835	24,73,776	2,03,115	2,77,201	3,66,393

### Diversity factor:

Electrical energy requirement for the country has been worked out by aggregating the electrical energy requirement of all the States/UT's. Peak electricity demands on regional and all-India basis have been calculated by taking into account diversity factors prevailing among states and regions respectively. Based on the analysis of

the diversity factors observed in the past years, the regional and all-India diversity factors adopted for the future are given in Table 3.

Table 3: Diversity Factor.

Northern Region	Western Region	Southern Region	Eastern Region	North Eastern Region	All India
1.13	1.09	1.05	1.07	1.07	1.13

### Transmission & Distribution (T&D) losses

The losses for Distribution Companies (Discoms) have been taken as per the trajectory of loss reduction given by the respective Discoms. The losses considered for each Discom also include the intra-state transmission losses in the ratio of their energy requirement to maintain uniformity as some States/Discoms were not able to segregate the transmission losses from the sub-transmission and distribution losses. The inter-state transmission losses have been added to T&D losses of the State to arrive at the overall T&D losses attributable to the State.

### Long term electricity demand projection for the years 2036-37 & 2041-42

Electricity demand projection has also been done for the years 2036-37 and 2041-42 by extrapolating the figures of electricity consumption of States/UTs with the application of suitable growth rates. The electrical energy requirement has been worked out by adding T&D losses estimated by extending the T&D losses trajectories further. Peak electricity demand of each State/UT has been derived by assuming suitable load factor.

Table 4: Long term electricity demand projection for the years 2031-32, 2036-37 & 2041-42 on all-India basis

Particulars	Year			CAGR (in %)	
	2031-32	2036-37	2041-42	2031-32 to 2036-37	2036-37 to 2041-42
Total Energy Consumption - MU	21,33,380	27,55,874	34,22,845	5.25	4.43
T&D losses –MU	3,40,396	3,39,613	3,53,475		
T&D losses (Ex- Bus) - %	13.76	10.97	9.36		
Energy Requirement (Ex-Bus) - MU	24,73,776	30,95,487	37,76,321	4.59	4.06
Annual Load Factor - %	77.07	75.91	75.01		
Peak Demand (Ex-Bus) – MW	3,66,393	4,65,531	5,74,689	4.91	4.30

Region-wise electricity demand projection for the years 2031-32, 2036-37 & 2041-42 is summarized in Table 5.

Table 5: Summary of region-wise electrical energy requirement & peak electricity demand for the years 2031-32, 2036-37 & 2041-42

Region	Energy Requirement (in MU)			Peak Demand (in MW)		
	2031-32	2036-37	2041-42	2031-32	2036-37	2041-42
Northern Region	7,73,545	9,68,339	11,80,168	1,27,553	1,59,205	1,93,381
Western Region	7,63,198	9,48,220	11,52,344	1,14,766	1,43,122	1,74,716
Southern Region	5,96,557	7,42,266	8,98,048	1,07,259	1,36,946	1,67,392
Eastern Region	3,08,103	3,95,351	4,93,973	50,420	66,296	84,276
North Eastern Region	32,373	41,312	51,788	6,519	8,608	10,937
All India	24,73,776	30,95,487	37,76,321	3,66,393	4,65,531	5,74,689

**Summary of Electricity Demand Projection:**

Electrical energy requirement and peak electricity demand for the years 2021-22 to 2041-42 are summarized in Table 6. CAGR of electrical energy requirement and peak electricity demand is summarized in Table 7.

Table 6: Electrical Energy Requirement and Peak Electricity Demand from the year 2021-22 to 2041-42 on all-India basis

Year	Energy Requirement	Peak Demand
	(MU)	(MW)
2021-22	13,81,646	2,03,115
2026-27	19,07,835	2,77,201
2031-32	24,73,776	3,66,393
2036-37	30,95,487	4,65,531
2041-42	37,76,321	5,74,689

Table 7: CAGR of Electrical Energy Requirement and Peak Electricity Demand from the year 2021-22 to 2041-42 on all-India basis

Year	Growth in Energy Requirement	CAGR of Energy Requirement	Growth in Peak Demand	CAGR of Peak Demand
	(MU)	(%)	(MW)	(%)
2021-22 to 2026-27	5,26,189	6.67	74,085	6.42
2026-27 to 2031-32	5,65,941	5.33	89,192	5.74
2031-32 to 2036-37	6,21,711	4.59	99,139	4.91
2036-37 to 2041-42	6,80,834	4.06	1,09,158	4.30

State/UT-wise details of electrical energy requirement (ex-bus) and peak electricity demand for the years 2021-22, 2026-27, 2031-32, 2036-37 & 2041-42 are given in Table 14 and Table 15 respectively.

### Review of 19<sup>th</sup> EPS Projections vis-a-vis Actual Achievement

The 19<sup>th</sup> EPS projections vs actual electrical energy requirement and peak demand on all-India basis are tabulated below:

Table 8: Comparison of projected electrical energy requirement as per 19<sup>th</sup> EPS vs actual on all-India basis

Year	Electrical Energy Requirement			
	19 <sup>th</sup> EPS Projections	Actual	Difference (19 <sup>th</sup> EPS Forecast – Actual)	
	(in MUs)	( in MUs)	( in MUs)	( in % )
2016-17	11,60,429	11,42,928	17,501	1.51
2017-18	12,40,760	12,13,326	27,434	2.21
2018-19	13,17,962	12,74,595	43,367	3.29
2019-20	13,99,913	12,91,010	1,08,903	7.78
2020-21	14,83,257	12,75,534	2,07,723	14.00
2021-22	15,66,023	13,75,663	1,90,360	12.16

Table 9: Comparison of projected peak electricity demand as per 19<sup>th</sup> EPS vs actual on all-India basis

Year	Peak Electricity Demand			
	19 <sup>th</sup> EPS Projections	Actual	Difference (19 <sup>th</sup> EPS Forecast – Actual)	
	(in MW)	( in MW)	( in MW)	( in % )
2016-17	1,61,834	1,59,542	2,292	1.42
2017-18	1,76,897	1,64,066	12,831	7.25
2018-19	1,88,360	1,77,022	11,338	6.02
2019-20	2,00,696	1,83,804	16,892	8.42
2020-21	2,13,244	1,90,198	23,046	10.81
2021-22	2,25,751	2,03,014	22,737	10.07

It has been observed that the actual values were closer to the forecasts in the initial years. However, deviations were appreciable in the later years. The variation between the forecast and actual figures can be attributed mainly to three factors - slower economic growth than expected, impact of COVID-19 pandemic and higher rainfall during 2019-20.

### Comparison of 20<sup>th</sup> EPS projections with 19<sup>th</sup> EPS projections

The power demand forecast of 20<sup>th</sup> & 19<sup>th</sup> EPS on all-India basis for the overlapping years (i.e. 2021-22 to 2036-37) are tabulated below:

Table 10: Summary of 19<sup>th</sup> EPS Projection

Particulars	2021-22	2026-27	2031-32	2036-37	CAGR (%)		
					2021-22 to	2026-27 to	2031-32 to
					2026-27	2031-32	2036-37
Energy Requirement (MU)	15,66,023	20,47,434	25,30,531	30,49,478	5.51	4.33	3.80
Peak Demand (MW)	2,25,751	2,98,774	3,70,462	4,47,702	5.77	4.40	3.86

Table 11: Summary of 20<sup>th</sup> EPS Projection

Particulars	2021-22	2026-27	2031-32	2036-37	CAGR (%)		
					2021-22 to	2026-27 to	2031-32 to
					2026-27	2031-32	2036-37
Energy Requirement (MU)	13,81,646	19,07,835	24,73,776	30,95,487	6.67	5.33	4.59
Peak Demand (MW)	2,03,115	2,77,201	3,66,393	4,65,531	6.42	5.74	4.91

As observed from the above tables, the growth rates of 20<sup>th</sup> EPS forecast are comparatively higher than 19<sup>th</sup> EPS forecast. However, the actual quantum of Energy Requirement & Peak Demand is converging in the longer term. It is occurring because of the lesser base value considered for 20<sup>th</sup> EPS in accordance with actual situations prevailing at present.

### Overview of Electricity Demand Forecast under a moderate scenario

The electricity demand forecast discussed above is estimated under optimistic scenario which is based on the complete achievement of targets set by the government for various planned initiatives having potential to impact power demand of the country such as National Hydrogen Mission. In another exercise, a moderate scenario has also been worked out which is based on lesser realization of the government targets in view of constraints that may appear due to unpredictability associated with real life.

The electrical energy consumption, T&D losses, electrical energy requirement, peak electricity demand and load factor for the years 2021-22, 2026-27 and 2031-32 on all India basis under the moderate scenario are summarized in Table 12.

Table 12 - Electrical energy consumption, T&amp;D losses, electrical energy requirement and peak electricity demand for the years 2021-22, 2026-27 and 2031-32 on all-India basis under a moderate scenario

Particulars	Year			CAGR (in %)	
	2021-22	2026-27	2031-32	2021-22 to	2026-27 to
				2026-27	2031-32
Total Energy Consumption - MU	11,38,408	15,60,348	19,81,126	6.51	4.89
T&D losses –MU	2,43,237	2,88,333	3,15,453		
T&D losses (Ex- Bus) - %	17.60	15.60	13.74		
Energy Requirement (Ex-Bus) - MU	13,81,646	18,48,682	22,96,580	6.00	4.43
Annual Load Factor - %	77.65	79.84	79.78		
Peak Demand (Ex-Bus) – MW	2,03,115	2,64,329	3,28,592	5.41	4.45

The long term electricity demand projection for the years 2036-37 & 2041-42 on all India basis under the moderate scenario are summarized in Table 13.

Table 13: Long term electricity demand projection for the years 2031-32, 2036-37 &amp; 2041-42 on all-India basis under moderate scenario

Particulars	Year			CAGR (in %)	
	2031-32	2036-37	2041-42	2031-32 to	2036-37 to
				2036-37	2041-42
Total Energy Consumption - MU	19,81,126	24,90,394	30,30,473	4.68	4.00
T&D losses –MU	3,15,453	3,06,092	3,12,093		
T&D losses (Ex- Bus) - %	13.74	10.95	9.34		
Energy Requirement (Ex-Bus) - MU	22,96,580	27,96,487	33,42,566	4.02	3.63
Annual Load Factor - %	79.78	78.84	78.21		
Peak Demand (Ex-Bus) – MW	3,28,592	4,04,928	4,87,867	4.27	3.80

## Report Layout

The Report contains eight Chapters as detailed below:

- i. **Chapter 1** - covers the background of the electric power survey (Constitution of 20<sup>th</sup> Electric Power Survey Committee & sub committees & the discussions held), methodology adopted and impacts of various emerging aspects and government policies on power demand.

- ii. **Chapter 2** - covers all-India, State/UT/Discom- wise electricity demand projection for the years 2021-22 to 2031-32.
- iii. **Chapter 3** - covers review of 19<sup>th</sup> EPS projections vis-à-vis actual electrical energy requirement and peak electricity demand. It also covers comparison between 20<sup>th</sup> EPS projections and 19<sup>th</sup> EPS projections.
- iv. **Chapter 4** - covers category wise (domestic, commercial, public lighting etc.) projection of electrical energy requirement and peak electricity demand for the years 2021-22 to 2031-32 on all-India and Regional basis.
- v. **Chapter 5** - covers category wise projection of electrical energy requirement and peak electricity demand for Discoms, States and UTs for the years 2021-22 to 2031-32.
- vi. **Chapter 6** - covers perspective electricity demand for the States/UT's/Regions and for the country for the years 2036-37 and 2041-42.
- vii. **Chapter 7** - covers electricity demand for the States/UT's/Regions inclusive of Captive Power Plants and Solar Roof Tops.
- viii. **Chapter 8** - covers all-India and State/UT wise electricity demand projections for the years 2021-22 to 2041-22 under a moderate scenario.

\*\*\*\*\*

Table 14: State/UT wise **Electrical Energy Requirement (MU)** at Power Station Bus Bar (Utilities)

State	2021-22	2026-27	2031-32	2036-37	2041-42
Chandigarh	1,606	1,911	2,157	2,419	2,699
Delhi	31,527	42,566	52,792	65,387	80,877
Haryana	55,535	82,981	1,14,636	1,46,508	1,80,729
Himachal Pradesh	12,115	15,238	18,807	22,746	27,007
J&K	19,324	22,507	28,294	35,332	43,837
Ladakh	190	321	551	871	1,281
Punjab	62,851	81,959	1,04,928	1,27,155	1,52,702
Rajasthan	89,918	1,33,550	1,71,883	2,16,144	2,66,124
Uttar Pradesh	1,29,580	1,91,138	2,53,974	3,20,346	3,87,169
Uttarakhand	15,541	20,142	25,524	31,432	37,744
<b>Northern Region</b>	<b>4,18,188</b>	<b>5,92,312</b>	<b>7,73,545</b>	<b>9,68,339</b>	<b>11,80,168</b>
Chhattisgarh	31,948	47,208	63,436	80,819	98,546
Dadar Nagar Haveli	6,848	9,559	11,919	14,773	18,205
Daman & Diu	2,615	3,437	4,355	5,410	6,600
Goa	4,456	5,512	6,847	8,438	10,319
Gujarat	1,23,788	1,82,507	2,42,993	3,06,115	3,72,295
Madhya Pradesh	86,521	1,28,844	1,68,854	2,17,218	2,74,636
Maharashtra	1,72,818	2,19,726	2,64,793	3,15,446	3,71,742
<b>Western Region</b>	<b>4,28,994</b>	<b>5,96,793</b>	<b>7,63,198</b>	<b>9,48,220</b>	<b>11,52,344</b>
Andhra Pradesh	68,438	98,162	1,37,022	1,75,787	2,15,460
Karnataka	72,799	88,232	1,05,970	1,26,178	1,49,005
Kerala	26,626	33,903	42,885	52,596	62,791
Lakshadweep	56	66	77	88	99
Puducherry	2,907	3,436	3,947	4,507	5,117
Tamil Nadu	1,09,914	1,44,086	1,86,106	2,28,470	2,69,237
Telangana	70,871	92,967	1,20,549	1,54,641	1,96,338
<b>Southern Region</b>	<b>3,51,611</b>	<b>4,60,853</b>	<b>5,96,557</b>	<b>7,42,266</b>	<b>8,98,048</b>
A&N	338	368	394	420	447
Bihar	36,239	58,256	82,876	1,12,716	1,47,379
DVC	16,630	23,087	31,211	40,621	51,135
Jharkhand	18,355	25,463	33,799	43,441	54,647
Odisha	38,344	48,627	59,286	70,582	82,285
Sikkim	616	819	1,093	1,456	1,935
West Bengal	54,020	76,352	99,443	1,26,114	1,56,145
<b>Eastern Region</b>	<b>1,64,542</b>	<b>2,32,971</b>	<b>3,08,103</b>	<b>3,95,351</b>	<b>4,93,973</b>
AP	875	1,117	1,397	1,720	2,089
Assam	10,869	15,151	20,285	26,384	33,430
Manipur	1,029	1,363	1,794	2,320	2,950
Meghalaya	2,264	2,711	3,134	3,612	4,149
Mizoram	823	1,252	1,816	2,580	3,594
Nagaland	867	1,088	1,299	1,545	1,830
Tripura	1,585	2,222	2,648	3,151	3,745
<b>North Eastern Region</b>	<b>18,312</b>	<b>24,904</b>	<b>32,373</b>	<b>41,312</b>	<b>51,788</b>
<b>All India</b>	<b>13,81,646</b>	<b>19,07,835</b>	<b>24,73,776</b>	<b>30,95,487</b>	<b>37,76,321</b>

Table 15: State/UT wise **Peak Electricity Demand (in MW)** at Power Station Bus Bar (Utilities)

State	2021-22	2026-27	2031-32	2036-37	2041-42
Chandigarh	428	492	563	641	726
Delhi	7,329	9,460	12,222	15,189	18,849
Haryana	12,137	16,337	21,644	26,896	32,396
Himachal Pradesh	2,033	2,571	3,190	3,878	4,629
J&K	3,000	3,566	4,633	5,952	7,566
Ladakh	61	85	120	170	243
Punjab	13,558	16,925	20,587	24,348	28,581
Rajasthan	15,803	21,175	27,032	33,459	40,307
Uttar Pradesh	24,991	33,017	44,066	55,592	67,170
Uttarakhand	2,474	3,249	4,159	5,175	6,276
<b>Northern Region</b>	<b>73,367</b>	<b>97,898</b>	<b>1,27,553</b>	<b>1,59,205</b>	<b>1,93,381</b>
Chhattisgarh	5,029	7,081	9,713	12,758	16,141
Dadar Nagar Haveli	892	1,273	1,617	2,030	2,521
Daman & Diu	373	493	631	793	979
Goa	703	901	1,128	1,401	1,725
Gujarat	19,457	27,710	36,287	45,581	55,267
Madhya Pradesh	15,941	21,592	27,386	33,708	40,412
Maharashtra	28,083	36,376	44,622	54,137	64,999
<b>Western Region</b>	<b>65,437</b>	<b>89,457</b>	<b>1,14,766</b>	<b>1,43,122</b>	<b>1,74,716</b>
Andhra Pradesh	12,563	17,758	24,387	30,975	37,081
Karnataka	14,841	17,810	21,613	26,016	31,071
Kerala	4,390	5,549	6,967	8,483	10,055
Lakshadweep	11	13	15	17	19
Puducherry	473	567	652	746	849
Tamil Nadu	16,899	21,736	28,291	34,996	41,543
Telangana	14,176	19,529	27,059	36,315	47,349
<b>Southern Region</b>	<b>61,165</b>	<b>80,864</b>	<b>1,07,259</b>	<b>1,36,946</b>	<b>1,67,392</b>
A&N	60	67	75	83	92
Bihar	6,923	10,553	15,159	20,765	27,287
DVC	3,081	4,220	5,649	7,388	9,456
Jharkhand	2,835	3,808	4,997	6,409	8,052
Odisha	5,645	7,630	9,782	12,347	15,358
Sikkim	134	179	241	323	433
West Bengal	9,090	12,891	16,824	21,391	26,562
<b>Eastern Region</b>	<b>26,043</b>	<b>37,265</b>	<b>50,420</b>	<b>66,296</b>	<b>84,276</b>
AP	170	223	282	352	434
Assam	2,138	3,045	4,128	5,445	7,006
Manipur	260	344	448	576	731
Meghalaya	408	492	575	670	779
Mizoram	157	231	331	460	621
Nagaland	155	195	235	282	336
Tripura	329	531	731	952	1,182
<b>North Eastern Region</b>	<b>3,437</b>	<b>4,855</b>	<b>6,519</b>	<b>8,608</b>	<b>10,937</b>
<b>All India</b>	<b>2,03,115</b>	<b>2,77,201</b>	<b>3,66,393</b>	<b>4,65,531</b>	<b>5,74,689</b>

## Chapter-1

### Introduction & Methodology

The projection of electricity demand is a vital and prerequisite input to formulate medium-term (more than 1 year and up to 5 years) & long term (more than 5 year) plans. The medium term projections of electricity demand are mainly used in preparing operational planning, financial planning and tariff setting. The long-term projections of electricity demand are more useful in planning investment in generating capacity, tying up fuel supplies and transmission & distribution system augmentations. A fairly accurate electricity demand projection is very important in planning as it ensures availability of supply of electricity, as well as provides the means of avoiding over and under-utilization of power infrastructures and making the best possible use of them. Therefore, periodic Electric Power Survey (EPS) is conducted by Central Electricity Authority (CEA) to assess the electricity demand of the country on medium and long term basis.

#### 1.1 Aims and objectives

- i. To provide basic input for formulation of developmental plans, programmes and schemes concerning generation, transmission and distribution of electricity by Discoms/ State Electricity Departments/Licensees/State Utilities/Central Agencies.
- ii. To facilitate States/UTs to identify priority sectors and develop optimum infrastructure.
- iii. To help the utilities in power procurement planning in the medium and long term.

#### 1.2 Background

Central Electricity Authority (CEA) conducts periodic Electric Power Survey (EPS) of the country to assess the Discom/State/Union Territory/Region wise and all-India electricity demand on medium and long term basis. So far, nineteen EPSs have been conducted. Volume 1 of 19<sup>th</sup> EPS report, the last in the series of EPS, covering the year-wise electricity demand projection for each Discom/State/ UT/ Region and for all-India in detail for the years 2016-17 to 2026-27 as well as the perspective electricity demand projection for the year 2031-32 and 2036-37 through Partial End Use Method (PEUM) was published in January, 2017. Volume II & Volume III of 19<sup>th</sup> EPS covered the electricity demand forecast of the National Capital Region (NCR) &

Mega Cities respectively. The fourth volume covered the electricity demand forecast of the country through econometric method.

To reassess the electricity demand, the 20<sup>th</sup> Electric Power Survey Committee (EPSC) was constituted by CEA in May, 2020 (copy is enclosed as **Appendix - I**). The terms of reference of the Committee were as under:

- i. To finalize the methodology of load forecast.
- ii. To forecast the year wise electricity demand projection for each State, Union Territory, Region and All India in detail for the years 2021-22 to 2031-32.
- iii. To project the electricity demand for the terminal years 2036-37 & 2041-42.

The first meeting of 20<sup>th</sup> EPSC was held at New Delhi on 26.11.2020 & 04.12.2020 under the Chairmanship of Chairperson, CEA and Chairman of 20<sup>th</sup> EPSC to deliberate on issues and aspects related to 20<sup>th</sup> EPS of the country. The proforma for collection of data, modalities for collection of data from Discoms/Licensees/ State Electricity Departments; methodology to be adopted for the electricity demand forecast exercise etc. were discussed in the meeting. It was decided that the electricity demand projection would be done by Partial End Use Method (PEUM).

On the recommendations of the EPSC committee, the following three dedicated sub-committees were constituted further for -

- i. Assessing impact of Covid on power demand (copy of the order is enclosed as **Appendix - II**).
- ii. Assessing impact of renewable penetration on power demand (copy of the order is enclosed as **Appendix - III**).
- iii. Finalizing methodologies for peak demand forecast (copy of the order is enclosed as **Appendix - IV**).

Based on the way forward suggested by the EPSC and the aforementioned three sub-committees, Electricity demand projection has been done for Discoms/States/UTs/Regions and for the country by PEUM for the years 2021-22 to 2031-32. For each Discom, electricity demand projection has been done separately for different consumer categories viz. domestic, commercial, irrigation, industries, public water works, public lighting, Railways etc.

Perspective electricity demand projection has also been done for the States/UT's/Regions and for the country for the years 2036-37 and 2041-42.

Factors like reduction of transmission & distribution losses, energy efficiency improvement measures, production of green hydrogen, penetration of electric vehicles, roof-top solar, solar pumps etc. have been suitably factored in the electricity demand forecast.

### 1.3 Stake holder Consultations:

One-to-one meetings were held with officers of each Discom/State Electricity Department/ Transmission Companies of State/UT separately for reconciling the discrepancies observed with respect to the input data submitted by them and to understand their various specific issues and future planning. Detailed discussions were also held regarding category-wise electricity consumption in the past, projections for future, impact of emerging aspects and efficiency improvement measures, peak demand, load factor to be adopted etc. Effect of various initiatives of Government of India which would affect the electricity demand viz. T&D loss reduction, installation of roof top solar, penetration of electric vehicles, National Hydrogen Energy Mission, PM KUSUM Yojna etc. were also discussed.

Thereafter, draft forecasts were prepared and shared with all concerned for their observations to fine tune it further. Subsequently, final interactions were held with each concerned utility on regional basis as per the details given below:

- i. Northern Region (03.03.2022 & 04.03.2022) at Delhi.
- ii. Southern Region (10.03.2022 & 11.03.2022) at Bengaluru.
- iii. Western Region (24.03.2022 & 25.03.2022) at Ahmedabad.
- iv. North Eastern Region (08.04.2022) through Video Conferencing.
- v. Eastern Region (04.04.2022 & 05.04.2022) at Delhi.

The forecast has been prepared in consultation with all the concerned power utilities and with mutual consensus. To discuss and approve the draft report of 20<sup>th</sup> EPS, the 2<sup>nd</sup> meeting of 20<sup>th</sup> EPSC was held on 05.09.2022. After deliberations, the Committee approved the draft report and suggested that the same may be finalised after taking into account minor changes/modifications as suggested by some States/UTs.

## 1.4 Methodology

### 1.4.1 Partial End-Use Method (PEUM)

Partial End Use Method is a combination of time series analysis and end-use methods. It is a “bottom-up” approach focused on analysing energy needs of end-user. The time series method has been used to derive growth indicators by giving higher weightage to the recent trends so as to consider the benefits of energy conservation initiatives and technological changes.

Electricity demand is a derived demand that arises for satisfying some needs of consumers which are met through the use of appliances. Hence, demand for electrical energy depends on the demand for energy services and the choice of energy using processes or devices. End-use service demand is affected not only by the cost of energy but also by other factors such as climatic conditions, affordability or income of the consumers, preference for the end-use service etc. Similarly, demand for end-use appliances depends on the relative prices of the appliances, relative cost of operation, availability of appliances, etc.

It has been observed that the behaviours of individual consumers differ drastically because of various factors such as their individual choices, socio-economic background, geographical locations etc. Even the behaviour of a single consumer is found to be very unpredictable that keeps on changing on day to day basis. However, their behaviours are found consistent once aggregated to a certain level as such grouping cancels out the anomalies associated with any particular user. Therefore, electricity demand projection has been made for various categories of electricity consumers such as Domestic, Commercial, Irrigation, Industrial etc. As analysis was done by grouping end users under various categories and not on each end user individually, it is termed as “Partial End Use Method”.

### 1.4.2 Input Data:

For carrying out electricity demand projection, the annual electricity data for category wise consumption data (such as Domestic, Commercial, Irrigation, Industrial etc.), Transmission and Distribution losses, Open Access & Peak Demand for the period of 2010-11 to 2020-21 were furnished by the Discoms/Utilities/Electricity Departments of the States / UTs. They have also provided future projections.

State/UT wise annual statements of power supply position brought out by CEA indicating actual electrical energy requirement & availability, peak electricity demand & peak met and inter-regional & all-India diversity factors were also studied and considered for the demand forecast.

### 1.4.3 Energy Requirement Forecast:

The following methodologies have been adopted to forecast electrical energy requirements:

- i. Electrical energy consumption of each Discom has been worked out by Partial End Use Method.
- ii. Electrical energy requirement of each Discom has been worked out by adding the corresponding Transmission losses (intra-state) & Distribution losses to the electrical energy consumption, keeping into account the projected reduction in the losses.
- iii. Intra State Transmission losses have been apportioned to each Discom in the ratio of its respective energy requirement (i.e. Energy Consumption + Distribution losses) if more than one Discom is present in any state.
- iv. Electrical energy consumption of State has been worked out by summation of electrical energy consumption of Discoms in the State. Open Access consumptions were also added additionally under “Others” category at state level if Discoms had not accounted for such energy at their level.
- v. Electrical energy requirement of the State has been worked out by adding summation of T&D losses of each Discom to the electrical energy consumption of the state.
- vi. Ex-bus electrical energy requirement of the state (i.e. on generators’ bus bar) has been obtained by adding the inter-state transmission losses to the electrical energy requirement of the state.
- vii. The inter-state transmission losses have been calculated only on the energy the states are expected to import from the national grid which in turn was based on the ratio of the energy the states had imported against their energy requirement in past.
- viii. Energy consumptions and requirements at regional level have been obtained by adding the corresponding figures of each state of that particular region.
- ix. All India energy consumption and requirement have been obtained by adding the energy consumption and requirement respectively of all the five regions of the country.

#### 1.4.4 Peak Demand Forecast:

The following methodologies have been adopted to forecast Peak Demand:

- i. Peak electricity demand of Discoms has been worked out by assuming suitable load factors depending on past trends and their specific consumer mix.
- ii. Peak electricity demand of the state has been estimated by applying suitable diversity factor to the sum of peak electricity demand of its all Discoms as per the past trends.
- iii. Regional peak electricity demand has been estimated by applying suitable diversity factor, as per the past trend, to the sum of non-simultaneous peak electricity demand of the States and UTs forming part of the Region.
- iv. All India peak electricity demand has been worked out by applying suitable diversity factors, as per the past trend, to the sum of the non-simultaneous peak electricity demand of all the regions.

Based on the analysis of the diversity factors observed in the past years, the following regional and all-India diversity factors have been adopted for the future:

Table 1.1: Regional Diversity Factors

Northern Region	Western Region	Southern Region	Eastern Region	North Eastern Region	All India
1.13	1.09	1.05	1.07	1.07	1.13

#### 1.4.5 Categories of Consumption

The Discom-wise/ State/UT-wise, Region-wise and all- India projection of electricity consumption has been done on yearly basis from the years 2021-22 to 2031-32 for each of the following categories of electricity consumption:

- i. Domestic
- ii. Commercial
- iii. Public Lighting
- iv. Public Water Works
- v. Irrigation
- vi. LT Industries
- vii. HT Industries
- viii. Railway Traction
- ix. Bulk (Non-Industrial HT Consumers) Supply
- x. Others (including Open Access)

#### 1.4.6 Transmission and Distribution (T&D) Losses

The losses for Discoms have been taken as per the trajectory of loss reduction given by the respective Discoms. Generally, the losses in sub-transmission and distribution systems are attributable to the Discom. However, as per the data received, most of the Discoms were not able to segregate transmission losses from sub-transmission and distribution losses. Hence, to maintain uniformity, losses considered for each Discom also include intra-state transmission losses. T&D losses of a state are equal to the summation of T&D loss of Discoms in the State. The inter-state transmission losses have been added to the T&D losses of a State to arrive at the overall T&D losses attributable to the State. It has been assumed as 3% and calculated on the energy the states are expected to import from the national grid which in turn is based on the ratio of the energy imported by the states against their energy requirement in past.

#### 1.4.7 Load Factor

The load factor of a power system depends on the pattern of utilization of different types of load. If the system feeds block industrial loads like aluminium and other process industries etc. having high electric load factor, the overall system load factor would also tend to be high. In regard to estimation of load factor for future, if the pattern of utilization of different categories of load does not differ appreciably from the past in terms of percentage of total electric load, then it has been assumed that the system load factor of the past may continue. In case, the pattern is anticipated to change due to gradual withdrawal of restrictions/cuts/load shedding, Demand Side Management (DSM), policy intervention etc., then, it is necessary to estimate the future electric load factor. A broad analysis to ascertain the influence of load mix on the load factor has been undertaken. Based on the analysis of future electric load mix, the load factor for each State/Union Territory has been worked out.

#### 1.4.8 Methodology adopted for Open Access consumers including Railways

Electricity consumption of open access consumers in a state has generally been considered in the respective Discom. It has been done due to the following reasons:

- i. Open access consumers use the network of the Discom for supply of electricity in most cases.
- ii. The source of electricity may change but the location of load will remain the same.

- iii. Although Discoms need not have to consider the demand of open access consumers for power procurement, however, the same should have to be considered for augmentation of power network by the Discoms/States/UTs.
- iv. It will give a better picture for planning/augmenting the transmission/sub-transmission/distribution network for sourcing power to the open access consumer in the Discom/State.

In cases where Discom wise open access data were not available, such consumptions have been added at state level.

As per information furnished by Indian Railways, Railway is gradually shifting towards procurement of electricity through open access. As is the case with other open access consumers, the electricity demand of railways has also been considered at the respective Discom level (or at state level, if Discom wise data were not available).

## 1.5 Emerging Aspects affecting Power Demand

### 1.5.1 Electric Vehicles (EVs):

As recent trends seen in the transport sector globally, India's market is also signalling beginning of a new era of mobility with more thrust on electric vehicles. At the central level, several ministries and departments are involved in supporting the electric mobility transition, including Ministry of Road Transport and Highways, Department of Heavy Industry, Department of Industrial Policy and Promotion, Ministry of Finance, Ministry of Housing and Urban Affairs, Ministry of Power, Ministry of New and Renewable Energy, Department of Science and Technology and NITI Aayog. Several states have already formulated their EV policies and others are in the process. With these initiatives, the transport sector of the country is expected to see a wholesome change in the upcoming years. The increasing demand of EVs is expected to result in more electrical energy demand from the grid.

The assumptions and the methodologies adopted for assessing impact of electric vehicles on all India power demand were as follows:

#### **Assumptions:**

- i. Weighted Average annual growth of vehicles sold for last 20 years has been calculated as 5% and the same growth rate has been assumed for future.
- ii. Any vehicle sold is being de-registered after 15 years.

- iii. By 2030, 30% of total vehicle sales would be BEVs.
- iv. By 2042, all vehicle sales would be BEVs.
- v. The vehicles have been considered in two segments with the following parameters:

Table 1.2: Electric Vehicle Parameters

Type	Efficiency (in Wh/km)	Avg Km Travel in a Year	Charging Time (in Hrs)	Ratio of Vehicle charged in Night
2 Wheeler	33	12800	4	0.3
4 Wheeler	96.8	12000	8	0.7

### **Methodology:**

- i. The total vehicle sale is estimated as 1.95 crores by 2021-22 including EV sales.
- ii. The total vehicle sale by 2029-30 has been estimated by applying 5% annual growth rate on 1.95 crores vehicles sold during 2021-22 and it has been assumed that 30% of those would be EV.
- iii. The base value of electric vehicles sold has been assumed as total number of registered EVs estimated by 2021-22 i.e. 10.5 lakhs.
- iv. Based on the above assumptions, CAGR for EV sales has been calculated for the period of 2021-22 to 2029-30.
- v. Based on CAGR thus calculated, year wise expected EV sales have been estimated for the period of 2021-22 to 2029-30.
- vi. Similar approach has been adopted for calculating EV sales for the period of 2030-2031 to 2041-42.
- vii. Total BEV sales for 2041-42 has been estimated as equal to total vehicle sales (as per the assumption that all vehicle sales would be BEVs by that time) by applying 5% annual growth rate on 1.95 crores vehicle sold during 2021-22.
- viii. The base value for this period has been taken as estimated number of electric vehicles sold during 2029-30 as per the method described above at point (ii).
- ix. Based on the above assumptions, CAGR for EV sales has been calculated for the period of 2030-31 to 2041-42.
- x. Based on CAGR thus calculated, year wise expected EV sales have been estimated for the period of 2030-31 to 2041-42.
- xi. Energy Requirement = Total number of vehicles on road\*Efficiency \* Average Km Travel in a Year.
- xii. Peak Demand in MW = (Energy Requirement in MU \* 1000)/ (Charging Time\*365).

Based on the above assumptions and the methodologies adopted, the following results have been obtained:

- For FY 2031-32 -
  - BEV sale – 1.08 crores
  - Total BEV on Road – 4.91 crores.
  - EV share out of all vehicles - 14% of all vehicles.
  - Energy Requirement – 27 BU.
  - Peak Demand - 5 GW.

The following methodologies have been adopted for apportioning All India energy requirement to the States & Discoms on account of EVs:

- i. The additional energy requirement has been apportioned among various states in the ratio of number of vehicles registered in 2018-19.
- ii. It is assumed that the additional energy requirement would be incident on two categories viz. Domestic and Commercial, in the ratio of 70:30.
- iii. The additional energy requirement for a state has been apportioned among various Discoms as –
  - a. For each Discom, the ratio of their total energy requirement for domestic and commercial categories out of state's total energy requirement for domestic and commercial categories has been calculated.
  - b. EV Energy requirement of the state has been distributed among Discoms in their respective ratio of total energy requirement for domestic and commercial categories.
  - c. Then, EV Energy requirement of a Discom has been distributed into domestic and commercial categories in the ratio of 70:30.

### 1.5.2 Solar Roof Top

As a part of Intended Nationally Determined Contributions (INDCs), India has committed to increase the share of installed capacity of electric power from non-fossil-fuel sources to 40% by 2030. Solar energy is one of the main source to achieve this target and under this category, solar roof top projects are expected to have an appreciable share. The solar roof top project is a system installed mainly on the roof of a building and includes installations on open contiguous land within the area of premises. The generated solar power could be used either for captive consumption of the premises or could be fed into the grid. With the increasing solar roof top installations, the power demand from the grid is expected to decrease in proportion.

The assumptions and the methodologies adopted for assessing impact of solar roof top projects were as follows:

**Assumptions:**

- i. All India Estimated Installed Capacity = 50 GW by 2031-32.
- ii. The current state wise growth pattern will remain similar in future also.
- iii. The CUF of a solar project has been considered as 17%.
- iv. The internal consumption of a consumer from solar roof top has been considered as 75%.
- v. The impact of solar roof top would be on four categories mainly viz. Domestic, Commercial, LT & HT industries.

**Methodology:**

- i. All India target for 2031-32 has been apportioned among states as per the ratio of their target set by MNRE by 2022.
- ii. On the base value of actual existing installed capacity at present to the targeted installed capacity for 2031-32, CAGR has been calculated for each state.
- iii. The year wise installed capacity has been extrapolated for each state on the CAGR calculated as above.
- iv. The energy off set in MU from grid has been calculated as per formula  $(MW*24*365/1000) *0.17*0.75$ .
- v. The roof top energy figures of a State have been apportioned among various Discoms as per their respective total consumptions in four categories viz. Domestic, Commercial, LT & HT industries in the ratio of their respective consumptions.

Based on the above assumptions and the methodologies adopted, All India energy requirement off set due to Solar Roof Top installation has been estimated as 55 BU by FY 2031-32.

### 1.5.3 Solar Pump

Government of India has announced “PM-KUSUM” scheme in 2019 with the objective of providing energy and water security to farmers, enhancing their income, de-dieselising the farm sector and reducing environmental pollution. The Scheme consists of three components:

- i. Component A: Addition of 10,000 MW of solar capacity through installation of small solar power plants of capacity up to 2 MW.
- ii. Component B: Installation of 20 lakh standalone solar powered agricultural pumps.
- iii. Component C: Solarisation of 15 lakhs existing Grid-connected Agriculture Pumps.

The impact of only Component C of “PM KUSUM Scheme” has been considered in assessing impacts on power demand as this component would affect power demand from/to the grid. The Component A and Component B of the scheme would not have much impact on the demand from the electricity grid. The assumptions and the methodologies adopted for assessing impact of solar pumps on power demand were as follows:

***Assumptions & Methodology:***

- i. The capacity of each solar pump has been considered as 7.5 HP.
- ii. CUF of each solar pump is assumed as 17%.
- iii. Each solar pump will consume 100% of energy thus generated for internal purposes only (As installed capacity is less).
- iv. Target will be achieved by 2025-26 following an exponential trend with more growth in the later years considering the current pace of implementation.
- v. After 2025-26, a dip may be observed because of possible withdrawal of government support. But growth may be observed in subsequent years because of awareness regarding benefits of solar pumps. Therefore, after 2025-26, a moderate growth rate of 10% has been taken.
- vi. The MW equivalent for each state (year-wise) is calculated by using the formula – No. of pumps\*7.5\*746/1,000,000.
- vii. The MU equivalent of MW is calculated by using the formula –  $(MW*24*365/1000) *0.17$ .
- viii. The solar pump energy figures of a State are apportioned among various Discoms as per their respective consumptions in irrigation category.

**1.5.4 National Hydrogen Mission:**

Hon’ble Prime Minister has launched the “National Hydrogen Mission” on India’s 75<sup>th</sup> Independence Day (i.e. 15<sup>th</sup> August, 2021). The mission aims to aid the government in meeting its climate target and making a green hydrogen hub. The assumptions and the methodologies adopted for assessing impact of production of green hydrogen were as follows:

- i. Total green hydrogen production of the country is assumed as 10 MMT by 2030.
- ii. It is assumed that 50-unit electrical energy is required to produce 1 kg of hydrogen.
- iii. The energy demand reflected on the grid is assumed as only 1/2<sup>th</sup> of the total energy required for producing green hydrogen that is expected to meet through remote mode i.e. where electrolyzers are located at distant locations from the generating power plants. The other 1/2<sup>th</sup> of electric energy requirement for producing green hydrogen is expected to meet through co-location mode i.e. where electrolyzers are located in the vicinity of power generation plant (such requirements are appropriately reflected under CPP consumption in Chapter 7).
- iv. All India energy requirement is apportioned among different states in the ratio of their HT Industrial consumption.
- v. State level energy requirement thus calculated is apportioned among its Discoms in the ratio of their HT Industrial consumptions.
- vi. Energy Requirement on this account is added to HT Industrial consumption only.

Based on the above assumptions and the methodologies adopted, additional energy requirement for the country on account of green hydrogen production has been estimated as 250 BU by FY 2031-32.

#### **1.5.5 Reduction of AT&C losses:**

Programmes for reduction of AT&C losses like “Revamped Distribution Sector Scheme - A Reforms based and Results linked Scheme” etc. are under implementation by the Government. The target is to reduce AT&C losses to about 12-15% by the year 2024-25 on all-India basis. Reduction of AT&C losses would lead to reduction in electricity demand. However, the present level of AT&C losses for some Discoms are quite high and its reduction would take some more time. The losses for Discoms have been taken as per the trajectory of loss reduction given by the respective Discoms.

#### **1.5.6 DSM, Energy Conservation & Efficiency improvement programs:**

Ministry of Power, Government of India and the State Governments have introduced various programmes for Demand Side Management, Energy Conservation & Efficiency improvement programs such as Agricultural and Municipal Demand Side

Management, National Mission for Enhanced Energy Efficiency (NMEEE), Municipal Energy Efficiency Program (MEEP) by EESL, Street Lighting National Program (SLNP), On Farm Water Management (OFWM), National Mission on Sustainable Agriculture (NMSA), Zero effect, Zero Defect (ZED), Atal Jyoti Yojana (AJAY), National Manufacturing Competitiveness Program (NMCP) etc. It is expected that there would be reduction in electrical energy requirements and peak demand through implementation of these programs. Bureau of Energy Efficiency (BEE), in its “Unlocking National Energy Efficiency Potential (UNNATEE)” report published in June 2019, has set a target of saving 285 BU electrical energy for the country during 2031 under moderate scenario that corresponds to 11% saving. The state-wise targets indicated in the UNNATEE report have been factored into the electricity demand forecast exercise.

### **1.6 Assumptions:**

- i. The growth trends will continue as per the trends witnessed in the pre covid era. However, the base value will be offset.
- ii. The future growth trends have been estimated on the data till 2019-20 only. The data of FY 2020-21 has been ignored for this purpose.
- iii. The base value has been taken as the Average of actual data of FY 2020-21 & estimated data of FY 2020-21 based on the trends witnessed till FY 2019-20.
- iv. The actual power demands observed during the first quarter of FY 2022-23 are higher than the trends witnessed in the recent past. It may be attributed to three factors – (i) extreme weather conditions (ii) return to normalcy from Covid pandemic & (iii) shifting of CPP demand to the grid. The same has been factored in while estimating power demand of FY 2022-23.
- v. The assumptions considered for assessing impacts of emerging aspects such as EVs, solar roof tops, solar pumps, green hydrogen have been indicated in the concerned paras above.
- vi. The trends of energy imported by the states from the national grid to meet its power demand will remain similar to the past.

### **1.7 Other Important Points:**

- i. Exclusions: The EPS Report covers electricity demand projection for the utility system only. The projections do not include the portion of electricity demand

of industries and other consumers that would be met from their internal resources locally such as captive power plants. However, power demand projection including the demand meeting from CPPs and solar roof top is given separately in Chapter 7.

- ii. In most cases, the “Other” category consists “Open Access Consumption”.
- iii. In some cases, “Other” category also includes energy consumption not fitting into any of the standard categories such as temporary connections consumptions, State Centre Category (as in Jammu & Kashmir) etc.
- iv. The difference between energy requirement data submitted by the Discoms/States (summed at the state level) and energy requirement of the state indicated in the “Power Supply Position” report of CEA is also included under “Other” category at the state level as in the case of Assam & Odisha.
- v. Similarly, the energy demand of 14 small distribution licensees catering to about 70 MW load is added at the state level under “Others” category for the Gujarat State.
- vi. The energy supplied to WBSEDCL, JBVNL & IPCL by DVC has been excluded from the DVC’s consumption.
- vii. In cases where Discoms/States are hopeful of reducing T&D drastically over a shorter period of time due to some planned measures such as extensive meter installations (as is the case with the UT of Jammu & Kashmir), reduction in losses has not been considered in complete isolation as unmetered load then, would be expected to come up under metered load of different consumer categories albeit with a reduced quantum. Accordingly, adjustments have been made by assuming that 75% of reduction proposed by Discom in losses could be transferred into metered consumption in the categories specified.
- viii. The demand of Agra City (served by Torrent Power) has been reflected in the “Bulk Consumer” category of the Dakshinanchal Vidyut Vitran Nigam Limited (DVVNL), Uttar Pradesh.
- ix. The category wise consumption data of Bikaner (served by Bikaner Electricity Supply Limited) has been added to the corresponding category consumption of Jodhpur Vidyut Vitran Nigam Limited (JdVVNL), Rajasthan.

\*\*\*\*\*

## Chapter-2

### All India, State/UT/Discom Wise Power Demand Forecast (2021-22 to 2031-32)

#### 2.1 Introduction

The 20<sup>th</sup> EPS covers the electricity demand projection for the next 20 years. viz. year-wise projections from 2021-22 to 2031-32 and perspective electricity demand projection for the years 2036-37 and 2041-42. This chapter summarises the year wise projection of electrical energy requirement and peak electricity demand for the years 2021-22 to 2031-32 for Discoms/ States/UT's/Regions/all-India.

#### 2.2 Actual Power Demand in the past

The details of electrical energy requirement & peak demand observed for the country for the years 2014-15 to 2021-22 are given in Table 2.1.

Table 2.1: Electrical Energy Requirement & Peak Demand (2014-15 to 2021-22)

Year	Electrical Energy Requirement		Peak Demand	
	(MU)	Growth rate (%)	(MW)	Growth rate (%)
2014-15	1068923	6.65	148166	9.01
2015-16	1114408	4.26	153366	3.51
2016-17	1142928	2.56	159542	4.03
2017-18	1213326	6.16	164066	2.84
2018-19	1274595	5.05	177022	7.90
2019-20	1291010	1.29	183804	3.83
2020-21	1275534	-1.20	190198	3.48
2021-22	1375663	7.85	203014	6.74
CAGR(2014-15 to 2019-20)*		3.85		4.40
CAGR( 2016-17 to 2021-22)		3.78		4.94

\* ignoring Covid Year i.e. 2020-21.

# Source: Power supply position, GM Division, CEA

As observed from the above statistics, Peak Demand of the country has grown at a rapid pace in comparison to Electrical Energy Requirement. It suggests that the overall load factor of the nation is declining.

#### 2.2 Electricity Demand Forecast from 2021-22 to 2031-32

The electrical energy consumption, electrical energy requirement, peak electricity demand, T&D losses and load factor on all-India basis for the years 2021-22 to

2031-32 are given in Table 2.2. CAGR of electrical energy consumption, electrical energy requirement and peak electricity demand is summarized in Table 2.3. The expected growth rate for energy consumption (category-wise) is summarized in Table 2.4.

Table 2.2 Electrical energy consumption, electrical energy requirement, peak electricity demand, T&D losses and load factor on all-India basis (2021-22 to 2031-32)

Particulars	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption (MU)	1138408	1251129	1330415	1415987	1509157	1610053	1712971	1820855	1949040	2041635	2133380
Energy Requirement (MU)	1381646	1512918	1600214	1694634	1796627	1907835	2021072	2139125	2279676	2377646	2473776
Peak Demand (MW)	203115	216966	230144	244565	260118	277201	294716	313098	334811	350670	366393
T&D losses (%)	17.60	17.30	16.86	16.44	16.00	15.61	15.24	14.88	14.50	14.13	13.76
Annual Load Factor (%)	77.65	79.60	79.37	79.10	78.85	78.57	78.28	77.99	77.73	77.40	77.07

Table 2.3: CAGR (in %) of electrical energy consumption, electrical energy requirement and peak electricity demand

Particulars	2021-22 To 2026-27	2026-27 To 2031-32
Energy Consumption	7.18	5.79
Energy Requirement	6.67	5.33
Peak Demand	6.42	5.74

As observed from Table 2.3 above, the CAGR of peak demand of the country is estimated on the lower side compared to CAGR of energy requirement during the period 2021-22 to 2026-27 unlike what has been observed in the past (Table 2.1). Such estimation is based on the actual power scenario observed during the last two years during which the country has observed even more moderate growth in energy requirement in comparison to peak demand because of CoVID pandemic that has led to an abnormal decrease in load factor. As the signals of return to normalcy are already there, the load factor for the year 2022-23 is expected to be restored to pre CoVID era and therefore, more growth in energy requirement is expected in comparison to peak demand during 2022-23. Thereafter, a usual pattern of more growth in peak demand in comparison to electrical energy requirement is expected. Therefore, the peak demand growth rate for the country is again expected to be more compared to energy requirement during the period of 2026-27 to 2031-32.

Table 2.4: CAGR (in %) for energy consumption (category-wise)

Categories	2021-22 To 2026-27	2026-27 To 2031-32	2021-22 To 2031-32
Domestic	7.23	6.33	6.77
Commercial	6.51	6.05	6.28
Industrial	8.49	6.67	7.57
Irrigation	6.06	4.19	5.12
Others	6.39	4.61	5.49
Total	7.18	5.79	6.48

### 2.3 Region Wise Demand Forecast from 2021-22 to 2031-32

The projection of region-wise electrical energy requirement and peak electricity demand from the year 2021-22 to 2031-32 are given in Table 2.5 and Table 2.6 respectively.

Table 2.5 Region-wise electrical energy requirement at power station bus bars in MU (2021-22 to 2031-32)

Region	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Northern Region	418188	468224	499239	528394	559218	592312	627443	664377	707554	740406	773545
Western Region	428994	473729	498665	528152	560416	596793	631873	668218	713089	738686	763198
Southern Region	351611	368179	388055	410587	434511	460853	487501	515259	547409	572299	596557
Eastern Region	164542	182992	193179	205240	218961	232971	247963	263519	282264	295375	308103
North Eastern Region	18312	19796	21076	22261	23521	24904	26292	27752	29359	30880	32373
All India	1381646	1512918	1600214	1694634	1796627	1907835	2021072	2139125	2279676	2377646	2473776

Table 2.6 Region-wise electrical peak demand at power station bus bars in MW (2021-22 to 2031-32)

Region	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Northern Region	73367	77767	82688	87457	92476	97898	103650	109714	116745	122134	127553
Western Region	65437	70963	74704	79137	83986	89457	94748	100246	107050	110981	114766
Southern Region	61165	63424	67143	71362	75861	80864	85953	91285	97440	102379	107259
Eastern Region	26043	28737	30479	32544	34857	37265	39847	42546	45752	48106	50420
North Eastern Region	3437	3755	4029	4284	4556	4855	5159	5481	5835	6176	6519
All India	203115	216966	230144	244565	260118	277201	294716	313098	334811	350670	366393

## 2.4 State/UT/Discom-wise electricity demand forecast from 2021-22 to 2031-32

State/UT-wise projection of electrical energy consumption, T&D losses, electrical energy requirement, load factor and peak electricity demand from 2021-22 to 2031-32 is summarized in Tables 2.7- 2.11.

Discom-wise projection of electrical energy consumption, T&D losses, electrical energy requirement and peak electricity demand from 2021-22 to 2031-32 is summarized in Tables 2.12- 2.15.

**Table 2.7 – State/UT Wise Electrical Energy Consumption (in MU)**

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	1415	1532	1575	1616	1657	1697	1737	1780	1828	1885	1934
Delhi	28472	32263	33758	35277	36910	38563	40302	42129	44181	46095	48040
Haryana	45210	51248	54945	59223	63971	69052	74438	80183	87047	92203	97617
Himachal Pradesh	10373	10810	11300	11876	12488	13122	13781	14453	15256	15800	16340
J&K	10018	10669	12954	14505	16183	17585	18710	19860	21020	22096	23110
Ladakh	158	178	200	225	254	286	321	361	406	456	513
Punjab	52080	55190	58000	61323	64901	68770	72833	77138	82376	85912	89520
Rajasthan	71097	81114	90258	96437	102809	109652	116806	124318	133164	139590	146012
Uttar Pradesh	100511	118447	126365	135299	144909	155239	166202	177867	191210	202792	214598
Uttarakhand	13228	13903	14648	15495	16395	17339	18330	19361	20567	21424	22273
<b>Northern Region</b>	<b>332563</b>	<b>375354</b>	<b>404003</b>	<b>431277</b>	<b>460476</b>	<b>491306</b>	<b>523460</b>	<b>557450</b>	<b>597054</b>	<b>628255</b>	<b>659956</b>
Chhattisgarh	26281	29964	31985	34383	36982	39750	42705	45822	49531	52058	54712
Dadar Nagar Haveli	6380	7261	7608	8017	8453	8906	9382	9870	10459	10784	11105
Daman & Diu	2423	2631	2752	2891	3036	3184	3355	3534	3745	3889	4034
Goa	3733	3886	4053	4244	4449	4664	4889	5128	5412	5637	5867
Gujarat	106030	119759	127240	136487	146730	157432	168851	180823	195946	203702	211454
Madhya Pradesh	65659	75617	80690	86686	93168	101952	109387	117151	126284	132807	139026
Maharashtra	144417	153903	160888	168594	177214	186319	195081	204087	215376	222080	228230
<b>Western Region</b>	<b>354923</b>	<b>393021</b>	<b>415215</b>	<b>441303</b>	<b>470031</b>	<b>502208</b>	<b>533651</b>	<b>566416</b>	<b>606752</b>	<b>630958</b>	<b>654429</b>
Andhra Pradesh	60495	64523	69133	74583	80515	87016	93847	101081	109604	115785	121978
Karnataka	62575	64772	67224	70017	72975	76726	80085	83482	87467	90548	93460
Kerala	23061	24255	25534	26940	28418	29968	31596	33317	35314	37034	38683
Lakshadweep	51	52	54	56	58	60	62	65	67	69	71
Puducherry	2530	2658	2740	2832	2924	3022	3120	3224	3345	3438	3514
Tamil Nadu	92625	97905	103612	109939	116621	123683	131072	138850	147762	155466	163156
Telangana	62680	64806	68640	72966	77561	82578	87665	92946	98949	103459	107809
<b>Southern Region</b>	<b>304017</b>	<b>318971</b>	<b>336938</b>	<b>357333</b>	<b>379071</b>	<b>403054</b>	<b>427448</b>	<b>452965</b>	<b>482509</b>	<b>505798</b>	<b>528672</b>
A&N	267	276	284	292	300	308	315	322	330	338	345
Bihar	27026	31440	34658	37982	41892	45659	49703	53983	58917	63368	67699
DVC	16132	17096	18196	19498	20904	22395	23981	25646	27629	28932	30277
Jharkhand	14361	15259	16512	17842	19472	20984	22571	24224	26346	27732	29068
Odisha	31619	35745	36453	37668	39171	40907	42888	45065	47928	49504	50952
Sikkim	441	476	512	552	594	639	687	738	792	850	911
West Bengal	43061	48235	51299	54844	58723	62838	67251	71697	76960	80657	84410
<b>Eastern Region</b>	<b>132907</b>	<b>148527</b>	<b>157913</b>	<b>168678</b>	<b>181057</b>	<b>193731</b>	<b>207397</b>	<b>221674</b>	<b>238902</b>	<b>251380</b>	<b>263662</b>
AP	470	508	550	595	644	694	746	802	863	923	978
Assam	8777	9699	10316	10994	11721	12493	13320	14206	15204	16157	17127
Manipur	732	784	839	897	961	1027	1098	1172	1253	1339	1425
Meghalaya	1654	1732	1813	1897	1984	2074	2166	2259	2355	2437	2514
Mizoram	661	726	798	875	958	1046	1142	1241	1347	1455	1573
Nagaland	655	689	725	761	799	839	878	920	961	1001	1027
Tripura	1051	1118	1305	1377	1455	1581	1665	1750	1841	1933	2018
<b>North Eastern Region</b>	<b>13999</b>	<b>15256</b>	<b>16346</b>	<b>17397</b>	<b>18521</b>	<b>19754</b>	<b>21015</b>	<b>22351</b>	<b>23823</b>	<b>25244</b>	<b>26662</b>
<b>All India</b>	<b>1138408</b>	<b>1251129</b>	<b>1330415</b>	<b>1415987</b>	<b>1509157</b>	<b>1610053</b>	<b>1712971</b>	<b>1820855</b>	<b>1949040</b>	<b>2041635</b>	<b>2133380</b>

**Table 2.8 – State/UT Wise T&D Losses (in %)**

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	11.88	11.76	11.64	11.51	11.36	11.21	11.05	10.88	10.70	10.51	10.32
Delhi	9.69	9.67	9.61	9.55	9.47	9.40	9.33	9.25	9.17	9.09	9.00
Haryana	18.59	18.27	17.90	17.54	17.15	16.79	16.41	16.03	15.63	15.24	14.85
Himachal Pradesh	14.38	14.30	14.22	14.12	14.01	13.89	13.75	13.61	13.46	13.29	13.12
J&K	48.16	45.47	37.76	32.17	25.77	21.87	21.06	20.28	19.56	18.88	18.32
Ladakh	16.96	15.59	14.32	13.13	12.03	11.01	10.07	9.20	8.39	7.65	6.97
Punjab	17.14	16.96	16.77	16.56	16.33	16.09	15.84	15.57	15.28	14.99	14.68
Rajasthan	20.93	20.29	19.68	19.07	18.48	17.89	17.31	16.73	16.16	15.60	15.05
Uttar Pradesh	22.43	21.64	20.91	20.19	19.48	18.78	18.09	17.42	16.76	16.13	15.50
Uttarakhand	14.89	14.71	14.53	14.33	14.13	13.92	13.69	13.47	13.23	12.99	12.74
<b>Northern Region</b>	<b>20.48</b>	<b>19.83</b>	<b>19.08</b>	<b>18.38</b>	<b>17.66</b>	<b>17.05</b>	<b>16.57</b>	<b>16.09</b>	<b>15.62</b>	<b>15.15</b>	<b>14.68</b>
Chhattisgarh	17.74	17.36	16.98	16.59	16.20	15.80	15.39	14.99	14.58	14.16	13.75
Dadar Nagar Haveli	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83
Daman & Diu	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36
Goa	16.22	16.08	15.92	15.75	15.58	15.39	15.19	14.98	14.77	14.55	14.32
Gujarat	14.35	14.19	14.07	13.97	13.85	13.74	13.62	13.49	13.35	13.17	12.98
Madhya Pradesh	24.11	23.51	22.86	22.20	21.54	20.87	20.22	19.57	18.93	18.29	17.66
Maharashtra	16.43	16.26	15.98	15.74	15.45	15.20	14.95	14.68	14.39	14.10	13.81
<b>Western Region</b>	<b>17.27</b>	<b>17.04</b>	<b>16.73</b>	<b>16.44</b>	<b>16.13</b>	<b>15.85</b>	<b>15.54</b>	<b>15.23</b>	<b>14.91</b>	<b>14.58</b>	<b>14.25</b>
Andhra Pradesh	11.61	11.56	11.52	11.47	11.41	11.35	11.29	11.22	11.15	11.07	10.98
Karnataka	14.04	13.87	13.68	13.48	13.26	13.04	12.81	12.57	12.32	12.07	11.81
Kerala	13.39	13.04	12.69	12.33	11.97	11.61	11.24	10.88	10.52	10.16	9.80
Lakshadweep	10.17	9.96	9.74	9.51	9.28	9.05	8.81	8.58	8.33	8.09	7.85
Puducherry	12.99	12.81	12.63	12.44	12.24	12.04	11.83	11.62	11.40	11.18	10.95
Tamil Nadu	15.73	15.44	15.14	14.83	14.50	14.16	13.81	13.45	13.08	12.71	12.33
Telangana	11.56	11.50	11.44	11.36	11.27	11.18	11.07	10.96	10.83	10.70	10.57
<b>Southern Region</b>	<b>13.54</b>	<b>13.37</b>	<b>13.17</b>	<b>12.97</b>	<b>12.76</b>	<b>12.54</b>	<b>12.32</b>	<b>12.09</b>	<b>11.86</b>	<b>11.62</b>	<b>11.38</b>
A&N	20.88	19.91	18.96	18.03	17.14	16.27	15.43	14.61	13.83	13.07	12.34
Bihar	25.42	24.81	23.93	23.17	22.31	21.62	20.94	20.28	19.56	18.92	18.31
DVC	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Jharkhand	21.76	21.08	20.14	19.31	18.34	17.59	16.83	16.10	15.28	14.63	14.00
Odisha	17.54	16.99	16.36	16.26	16.10	15.87	15.59	15.26	14.89	14.49	14.06
Sikkim	28.39	27.01	25.67	24.38	23.14	21.94	20.79	19.68	18.63	17.61	16.64
West Bengal	20.29	19.83	19.30	18.77	18.24	17.70	17.16	16.65	16.14	15.63	15.12
<b>Eastern Region</b>	<b>19.23</b>	<b>18.83</b>	<b>18.26</b>	<b>17.81</b>	<b>17.31</b>	<b>16.84</b>	<b>16.36</b>	<b>15.88</b>	<b>15.36</b>	<b>14.89</b>	<b>14.42</b>
AP	46.27	44.58	42.89	41.21	39.54	37.88	36.25	34.63	33.04	31.49	29.97
Assam	19.25	18.99	18.64	18.28	17.92	17.54	17.16	16.77	16.38	15.98	15.57
Manipur	28.89	28.04	27.18	26.33	25.49	24.65	23.82	23.00	22.18	21.38	20.60
Meghalaya	26.93	26.28	25.62	24.93	24.22	23.51	22.78	22.04	21.30	20.55	19.80
Mizoram	19.65	19.01	18.38	17.73	17.10	16.46	15.83	15.20	14.59	13.98	13.39
Nagaland	24.52	24.23	23.92	23.59	23.25	22.89	22.52	22.13	21.73	21.32	20.89
Tripura	33.68	32.74	31.79	30.81	29.83	28.83	27.82	26.81	25.80	24.79	23.79
<b>North Eastern Region</b>	<b>23.55</b>	<b>22.93</b>	<b>22.44</b>	<b>21.85</b>	<b>21.26</b>	<b>20.68</b>	<b>20.07</b>	<b>19.46</b>	<b>18.86</b>	<b>18.25</b>	<b>17.64</b>
<b>All India</b>	<b>17.60</b>	<b>17.30</b>	<b>16.86</b>	<b>16.44</b>	<b>16.00</b>	<b>15.61</b>	<b>15.24</b>	<b>14.88</b>	<b>14.50</b>	<b>14.13</b>	<b>13.76</b>

**Table 2.9 – State/UT Wise Electrical Energy Requirement – Ex Bus (in MU)**

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	1606	1737	1783	1827	1869	1911	1953	1997	2047	2107	2157
Delhi	31527	35715	37346	39000	40771	42566	44448	46425	48641	50702	52792
Haryana	55535	62706	66926	71821	77217	82981	89050	95486	103176	108782	114636
Himachal Pradesh	12115	12614	13172	13829	14522	15238	15979	16730	17628	18222	18807
J&K	19324	19568	20811	21382	21800	22507	23700	24912	26132	27239	28294
Ladakh	190	210	233	259	288	321	357	398	443	494	551
Punjab	62851	66464	69686	73493	77571	81959	86536	91359	97237	101061	104928
Rajasthan	89918	101757	112368	119167	126118	133550	141260	149303	158836	165398	171883
Uttar Pradesh	129580	151152	159775	169529	179967	191138	202920	215392	229712	241780	253974
Uttarakhand	15541	16301	17138	18087	19093	20142	21238	22374	23702	24622	25524
<b>Northern Region</b>	<b>418188</b>	<b>468224</b>	<b>499239</b>	<b>528394</b>	<b>559218</b>	<b>592312</b>	<b>627443</b>	<b>664377</b>	<b>707554</b>	<b>740406</b>	<b>773545</b>
Chhattisgarh	31948	36260	38528	41223	44130	47208	50475	53900	57983	60649	63436
Dadar Nagar Haveli	6848	7794	8165	8605	9072	9559	10070	10594	11225	11575	11919
Daman & Diu	2615	2840	2970	3121	3277	3437	3622	3815	4042	4198	4355
Goa	4456	4630	4820	5038	5270	5512	5765	6032	6350	6597	6847
Gujarat	123788	139566	148082	158654	170323	182507	195467	209008	226141	234597	242993
Madhya Pradesh	86521	98863	104600	111424	118751	128844	137111	145662	155770	162540	168854
Maharashtra	172818	183777	191499	200087	209593	219726	229362	239207	251578	258529	264793
<b>Western Region</b>	<b>428994</b>	<b>473729</b>	<b>498665</b>	<b>528152</b>	<b>560416</b>	<b>596793</b>	<b>631873</b>	<b>668218</b>	<b>713089</b>	<b>738686</b>	<b>763198</b>
Andhra Pradesh	68438	72961	78134	84245	90889	98162	105792	113859	123361	130196	137022
Karnataka	72799	75202	77876	80922	84132	88232	91852	95486	99758	102973	105970
Kerala	26626	27892	29244	30729	32281	33903	35597	37384	39464	41220	42885
Lakshadweep	56	58	60	62	64	66	68	71	73	75	77
Puducherry	2907	3048	3136	3234	3332	3436	3539	3647	3776	3870	3947
Tamil Nadu	109914	115788	122102	129079	136399	144086	152074	160430	170006	178103	186106
Telangana	70871	73229	77503	82316	87414	92967	98578	104383	110971	115862	120549
<b>Southern Region</b>	<b>351611</b>	<b>368179</b>	<b>388055</b>	<b>410587</b>	<b>434511</b>	<b>460853</b>	<b>487501</b>	<b>515259</b>	<b>547409</b>	<b>572299</b>	<b>596557</b>
A&N	338	345	350	357	363	368	373	378	383	389	394
Bihar	36239	41814	45560	49438	53920	58256	62871	67715	73241	78155	82876
DVC	16630	17624	18757	20100	21550	23087	24721	26437	28482	29825	31211
Jharkhand	18355	19334	20677	22112	23846	25463	27140	28873	31096	32484	33799
Odisha	38344	43060	43582	44985	46689	48627	50810	53180	56316	57891	59286
Sikkim	616	651	689	730	773	819	867	919	974	1032	1093
West Bengal	54020	60163	63564	67518	71820	76352	81182	86018	91771	95599	99443
<b>Eastern Region</b>	<b>164542</b>	<b>182992</b>	<b>193179</b>	<b>205240</b>	<b>218961</b>	<b>232971</b>	<b>247963</b>	<b>263519</b>	<b>282264</b>	<b>295375</b>	<b>308103</b>
AP	875	916	964	1012	1064	1117	1170	1227	1289	1347	1397
Assam	10869	11972	12679	13454	14279	15151	16079	17069	18183	19230	20285
Manipur	1029	1089	1152	1218	1289	1363	1441	1522	1610	1703	1794
Meghalaya	2264	2350	2437	2527	2618	2711	2805	2898	2993	3067	3134
Mizoram	823	897	978	1063	1156	1252	1357	1464	1577	1691	1816
Nagaland	867	909	953	997	1041	1088	1134	1182	1228	1272	1299
Tripura	1585	1663	1913	1991	2073	2222	2306	2391	2481	2570	2648
<b>North Eastern Region</b>	<b>18312</b>	<b>19796</b>	<b>21076</b>	<b>22261</b>	<b>23521</b>	<b>24904</b>	<b>26292</b>	<b>27752</b>	<b>29359</b>	<b>30880</b>	<b>32373</b>
<b>All India</b>	<b>1381646</b>	<b>1512918</b>	<b>1600214</b>	<b>1694634</b>	<b>1796627</b>	<b>1907835</b>	<b>2021072</b>	<b>2139125</b>	<b>2279676</b>	<b>2377646</b>	<b>2473776</b>

Table 2.10 – State/UT Wise Load Factor (in %)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	41.29	43.99	43.70	43.39	43.08	42.80	42.57	42.41	42.33	42.26	42.18
Delhi	47.82	51.09	50.85	50.58	50.34	50.02	49.67	49.29	48.95	48.52	48.02
Haryana	51.05	54.70	55.12	55.60	56.18	56.66	57.16	57.65	58.30	58.77	59.09
Himachal Pradesh	67.02	66.95	66.88	66.81	66.74	66.67	66.60	66.53	66.46	66.39	66.32
J&K	71.81	70.94	70.88	70.76	70.59	70.37	70.05	69.56	69.18	68.58	68.08
Ladakh	35.39	36.81	38.28	39.81	41.40	43.06	44.78	46.57	48.44	50.37	52.39
Punjab	51.96	51.99	52.56	53.13	53.70	54.27	54.84	55.41	55.98	56.55	57.12
Rajasthan	64.18	70.45	70.79	70.90	71.02	71.14	71.27	71.39	71.53	71.62	71.72
Uttar Pradesh	58.16	65.13	65.09	65.04	64.98	64.93	64.87	64.82	64.76	64.70	64.64
Uttarakhand	70.46	70.23	70.09	69.83	69.70	69.54	69.39	69.26	69.11	68.98	68.83
<b>Northern Region</b>	<b>65.07</b>	<b>68.73</b>	<b>68.92</b>	<b>68.97</b>	<b>69.03</b>	<b>69.07</b>	<b>69.10</b>	<b>69.13</b>	<b>69.19</b>	<b>69.20</b>	<b>69.23</b>
Chhattisgarh	71.82	76.52	76.31	76.00	75.69	75.38	75.07	74.76	74.45	74.14	73.84
Dadar Nagar Haveli	84.81	84.35	83.98	83.56	83.23	82.97	82.67	82.39	82.05	81.73	81.44
Daman & Diu	77.52	77.41	77.32	77.22	77.11	77.00	76.87	76.74	76.59	76.43	76.26
Goa	70.17	69.25	68.53	68.16	67.90	67.69	67.53	67.46	67.34	67.24	67.17
Gujarat	72.00	73.29	73.62	73.91	74.27	74.54	74.80	75.05	75.35	75.56	75.78
Madhya Pradesh	60.87	65.18	65.63	66.07	66.51	66.92	67.36	67.81	68.25	68.70	69.15
Maharashtra	69.53	68.75	68.70	68.51	68.51	68.25	68.01	67.75	67.61	67.35	67.05
<b>Western Region</b>	<b>74.84</b>	<b>76.21</b>	<b>76.20</b>	<b>76.19</b>	<b>76.17</b>	<b>76.16</b>	<b>76.13</b>	<b>76.09</b>	<b>76.04</b>	<b>75.98</b>	<b>75.91</b>
Andhra Pradesh	61.72	61.86	62.04	62.23	62.43	62.63	62.84	63.05	63.27	63.47	63.66
Karnataka	55.52	56.47	56.38	56.28	56.19	56.08	55.97	55.85	55.75	55.63	55.50
Kerala	67.78	67.88	67.98	68.08	68.18	68.28	68.38	68.48	68.59	68.69	68.79
Lakshadweep	57.37	57.49	57.62	57.75	57.87	58.00	58.13	58.25	58.38	58.51	58.64
Puducherry	68.35	67.49	67.47	67.44	67.42	67.39	67.37	67.34	67.32	67.29	67.27
Tamil Nadu	73.25	75.11	74.99	74.88	74.76	74.65	74.54	74.42	74.31	74.19	74.08
Telangana	56.39	56.33	55.66	55.01	54.36	53.69	53.02	52.35	51.69	50.97	50.25
<b>Southern Region</b>	<b>65.62</b>	<b>66.27</b>	<b>65.98</b>	<b>65.68</b>	<b>65.38</b>	<b>65.06</b>	<b>64.75</b>	<b>64.43</b>	<b>64.13</b>	<b>63.81</b>	<b>63.49</b>
A&N	64.35	64.07	63.59	63.36	62.92	62.51	61.92	61.36	61.01	60.69	60.20
Bihar	58.58	62.44	62.31	62.11	61.94	61.78	61.64	61.49	61.35	61.27	61.19
DVC	61.61	61.95	62.07	62.20	62.32	62.45	62.57	62.70	62.82	62.95	63.07
Jharkhand	73.55	73.37	74.27	74.72	75.75	75.96	76.18	76.33	76.85	76.88	76.85
Odisha	77.01	75.22	74.47	73.73	72.99	72.26	71.54	70.82	70.11	69.41	68.72
Sikkim	51.76	51.68	51.60	51.51	51.43	51.35	51.27	51.19	51.10	51.02	50.94
West Bengal	67.50	67.33	67.31	67.30	67.29	67.28	67.26	67.24	67.22	67.18	67.14
<b>Eastern Region</b>	<b>72.12</b>	<b>72.69</b>	<b>72.35</b>	<b>71.99</b>	<b>71.71</b>	<b>71.37</b>	<b>71.04</b>	<b>70.70</b>	<b>70.43</b>	<b>70.09</b>	<b>69.76</b>
AP	57.67	57.06	56.77	56.45	56.31	56.15	55.93	55.87	55.75	55.68	55.45
Assam	57.03	56.50	56.29	56.12	55.97	55.81	55.65	55.51	55.36	55.23	55.11
Manipur	44.12	44.13	44.18	44.21	44.25	44.28	44.32	44.40	44.49	44.59	44.72
Meghalaya	62.63	62.56	62.48	62.41	62.33	62.24	62.14	62.02	61.88	61.72	61.56
Mizoram	58.64	59.03	59.50	59.85	60.28	60.55	60.90	61.04	61.14	61.26	61.39
Nagaland	62.66	62.55	62.53	62.42	62.30	62.26	62.15	62.10	62.03	61.94	61.83
Tripura	54.50	52.90	51.37	49.86	48.47	47.35	46.03	44.72	43.53	42.32	40.96
<b>North Eastern Region</b>	<b>60.82</b>	<b>60.18</b>	<b>59.72</b>	<b>59.31</b>	<b>58.94</b>	<b>58.56</b>	<b>58.18</b>	<b>57.81</b>	<b>57.44</b>	<b>57.08</b>	<b>56.69</b>
<b>All India</b>	<b>77.65</b>	<b>79.60</b>	<b>79.37</b>	<b>79.10</b>	<b>78.85</b>	<b>78.57</b>	<b>78.28</b>	<b>77.99</b>	<b>77.73</b>	<b>77.40</b>	<b>77.07</b>

**Table 2.11 – State/UT Wise Peak Electricity Demand – Ex Bus (in MW)**

State/UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	428	435	449	464	478	492	505	519	533	549	563
Delhi	7329	7770	8164	8571	9003	9460	9948	10469	11046	11615	12222
Haryana	12137	12788	13546	14411	15335	16337	17380	18478	19744	20648	21644
Himachal Pradesh	2033	2119	2215	2328	2448	2571	2699	2829	2983	3087	3190
J&K	3000	3075	3273	3369	3443	3566	3772	3993	4211	4427	4633
Ladakh	61	65	70	74	79	85	91	97	104	112	120
Punjab	13558	14327	14859	15502	16189	16925	17684	18478	19466	20028	20587
Rajasthan	15803	16291	17906	18959	20030	21175	22358	23590	25048	26048	27032
Uttar Pradesh	24991	26028	27531	29235	31061	33017	35082	37270	39781	41910	44066
Uttarakhand	2474	2603	2742	2905	3072	3249	3433	3623	3847	4004	4159
<b>Northern Region</b>	<b>73367</b>	<b>77767</b>	<b>82688</b>	<b>87457</b>	<b>92476</b>	<b>97898</b>	<b>103650</b>	<b>109714</b>	<b>116745</b>	<b>122134</b>	<b>127553</b>
Chhattisgarh	5029	5358	5708	6132	6592	7081	7602	8152	8805	9248	9713
Dadar Nagar Haveli	892	1021	1074	1138	1204	1273	1346	1421	1512	1565	1617
Daman & Diu	373	405	424	447	470	493	521	549	583	607	631
Goa	703	740	778	818	859	901	945	989	1043	1086	1128
Gujarat	19457	21550	22762	24291	25953	27710	29573	31515	33964	35137	36287
Madhya Pradesh	15941	17009	17874	18914	20024	21592	22826	24091	25596	26534	27386
Maharashtra	28083	30203	31495	32999	34567	36376	38105	39891	42042	43373	44622
<b>Western Region</b>	<b>65437</b>	<b>70963</b>	<b>74704</b>	<b>79137</b>	<b>83986</b>	<b>89457</b>	<b>94748</b>	<b>100246</b>	<b>107050</b>	<b>110981</b>	<b>114766</b>
Andhra Pradesh	12563	13363	14269	15337	16495	17758	19076	20461	22091	23243	24387
Karnataka	14841	15075	15636	16277	16947	17810	18578	19352	20254	20954	21613
Kerala	4390	4592	4808	5044	5291	5549	5818	6101	6431	6707	6967
Lakshadweep	11	12	12	12	13	13	13	14	14	15	15
Puducherry	473	502	517	533	549	567	584	602	624	639	652
Tamil Nadu	16899	17361	18336	19413	20545	21736	22976	24276	25764	27033	28291
Telangana	14176	14663	15704	16877	18138	19529	20968	22488	24215	25639	27059
<b>Southern Region</b>	<b>61165</b>	<b>63424</b>	<b>67143</b>	<b>71362</b>	<b>75861</b>	<b>80864</b>	<b>85953</b>	<b>91285</b>	<b>97440</b>	<b>102379</b>	<b>107259</b>
A&N	60	61	63	64	66	67	69	70	72	73	75
Bihar	6923	7495	8184	8908	9743	10553	11416	12326	13360	14276	15159
DVC	3081	3248	3450	3689	3947	4220	4510	4814	5176	5409	5649
Jharkhand	2835	2994	3163	3362	3576	3808	4048	4297	4597	4800	4997
Odisha	5645	6490	6635	6918	7252	7630	8053	8514	9107	9456	9782
Sikkim	134	141	150	159	169	179	190	201	214	227	241
West Bengal	9090	10150	10726	11395	12123	12891	13708	14530	15507	16164	16824
<b>Eastern Region</b>	<b>26043</b>	<b>28737</b>	<b>30479</b>	<b>32544</b>	<b>34857</b>	<b>37265</b>	<b>39847</b>	<b>42546</b>	<b>45752</b>	<b>48106</b>	<b>50420</b>
AP	170	180	190	201	211	223	234	246	259	271	282
Assam	2138	2376	2526	2689	2861	3045	3240	3449	3683	3905	4128
Manipur	260	276	291	308	325	344	363	383	404	426	448
Meghalaya	408	424	441	457	474	492	510	528	546	561	575
Mizoram	157	170	184	199	215	231	249	268	289	309	331
Nagaland	155	163	171	179	187	195	204	213	221	230	235
Tripura	329	356	421	452	484	531	567	605	645	687	731
<b>North Eastern Region</b>	<b>3437</b>	<b>3755</b>	<b>4029</b>	<b>4284</b>	<b>4556</b>	<b>4855</b>	<b>5159</b>	<b>5481</b>	<b>5835</b>	<b>6176</b>	<b>6519</b>
<b>All India</b>	<b>203115</b>	<b>216966</b>	<b>230144</b>	<b>244565</b>	<b>260118</b>	<b>277201</b>	<b>294716</b>	<b>313098</b>	<b>334811</b>	<b>350670</b>	<b>366393</b>

**Table 2.12 – Discom Wise Electrical Energy Consumption (in MU)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Chandigarh</b>	<b>1415</b>	<b>1532</b>	<b>1575</b>	<b>1616</b>	<b>1657</b>	<b>1697</b>	<b>1737</b>	<b>1780</b>	<b>1828</b>	<b>1885</b>	<b>1934</b>
Delhi - BRPL	11760	13986	14740	15538	16384	17282	18239	19260	20363	21543	22796
Delhi - BYPL	5983	6835	7053	7272	7490	7706	7920	8132	8343	8546	8733
Delhi - MES	226	231	235	240	245	249	254	260	266	273	279
Delhi - NDMC	989	1162	1238	1265	1291	1318	1345	1374	1405	1441	1475
Delhi - TPDDL	9262	9774	10145	10567	11011	11475	11964	12478	13097	13544	13977
<b>Delhi</b>	<b>28472</b>	<b>32263</b>	<b>33758</b>	<b>35277</b>	<b>36910</b>	<b>38563</b>	<b>40302</b>	<b>42129</b>	<b>44181</b>	<b>46095</b>	<b>48040</b>
Haryana - DHBVN	26009	29484	31707	34274	37058	40044	43240	46644	50566	53782	57189
Haryana - UHBVN	18815	21330	22651	24256	26023	28025	30114	32358	35126	36980	38898
<b>Haryana</b>	<b>45210</b>	<b>51248</b>	<b>54945</b>	<b>59223</b>	<b>63971</b>	<b>69052</b>	<b>74438</b>	<b>80183</b>	<b>87047</b>	<b>92203</b>	<b>97617</b>
<b>Himachal Pradesh</b>	<b>10373</b>	<b>10810</b>	<b>11300</b>	<b>11876</b>	<b>12488</b>	<b>13122</b>	<b>13781</b>	<b>14453</b>	<b>15256</b>	<b>15800</b>	<b>16340</b>
J&K - JPDCL	5035	5341	5668	6018	6386	6767	7155	7543	7927	8258	8607
J&K - KPDCCL	4984	5328	7286	8486	9796	10818	11555	12317	13093	13838	14503
<b>J&amp;K</b>	<b>10018</b>	<b>10669</b>	<b>12954</b>	<b>14505</b>	<b>16183</b>	<b>17585</b>	<b>18710</b>	<b>19860</b>	<b>21020</b>	<b>22096</b>	<b>23110</b>
<b>Ladakh</b>	<b>158</b>	<b>178</b>	<b>200</b>	<b>225</b>	<b>254</b>	<b>286</b>	<b>321</b>	<b>361</b>	<b>406</b>	<b>456</b>	<b>513</b>
<b>Punjab</b>	<b>52080</b>	<b>55190</b>	<b>58000</b>	<b>61323</b>	<b>64901</b>	<b>68770</b>	<b>72833</b>	<b>77138</b>	<b>82376</b>	<b>85912</b>	<b>89520</b>
Rajasthan - AVVNL	20331	22382	23914	25685	27310	29022	30789	32614	34749	36284	37819
Rajasthan - JVVNL	27791	34519	40804	43759	46976	50457	54162	58096	62859	66029	69197
Rajasthan - JdVVNL	22975	24212	25540	26994	28523	30173	31855	33607	35556	37277	38996
<b>Rajasthan</b>	<b>71097</b>	<b>81114</b>	<b>90258</b>	<b>96437</b>	<b>102809</b>	<b>109652</b>	<b>116806</b>	<b>124318</b>	<b>133164</b>	<b>139590</b>	<b>146012</b>
UP - DVVNL	20895	23469	24993	26720	28574	30568	32668	34892	37440	39647	41894
UP - KESCO	3178	3744	3885	4030	4178	4329	4484	4642	4802	4967	5134
UP - MVVNL	20675	24265	26016	27946	30015	32240	34605	37131	39946	42696	45521
UP - NPCL	2330	2804	3121	3528	3997	4523	5116	5768	6593	7136	7704
UP - PuVVNL	23527	27984	29740	31650	33678	35838	38113	40528	43216	45755	48300
UP - PVVNL	29906	36181	38610	41425	44467	47741	51216	54906	59212	62591	66045
<b>Uttar Pradesh</b>	<b>100511</b>	<b>118447</b>	<b>126365</b>	<b>135299</b>	<b>144909</b>	<b>155239</b>	<b>166202</b>	<b>177867</b>	<b>191210</b>	<b>202792</b>	<b>214598</b>
<b>Uttarakhand</b>	<b>13228</b>	<b>13903</b>	<b>14648</b>	<b>15495</b>	<b>16395</b>	<b>17339</b>	<b>18330</b>	<b>19361</b>	<b>20567</b>	<b>21424</b>	<b>22273</b>
<b>Northern Region</b>	<b>332563</b>	<b>375354</b>	<b>404003</b>	<b>431277</b>	<b>460476</b>	<b>491306</b>	<b>523460</b>	<b>557450</b>	<b>597054</b>	<b>628255</b>	<b>659956</b>
<b>Chhattisgarh</b>	<b>26281</b>	<b>29964</b>	<b>31985</b>	<b>34383</b>	<b>36982</b>	<b>39750</b>	<b>42705</b>	<b>45822</b>	<b>49531</b>	<b>52058</b>	<b>54712</b>
Dadar Nagar Haveli	6380	7261	7608	8017	8453	8906	9382	9870	10459	10784	11105
Daman & Diu	2423	2631	2752	2891	3036	3184	3355	3534	3745	3889	4034
<b>Goa</b>	<b>3733</b>	<b>3886</b>	<b>4053</b>	<b>4244</b>	<b>4449</b>	<b>4664</b>	<b>4889</b>	<b>5128</b>	<b>5412</b>	<b>5637</b>	<b>5867</b>
Gujarat - DGVCL	24231	27532	29326	31564	33983	36527	39208	41985	45386	47180	48980
Gujarat - MGVCL	10971	12130	12812	13673	14602	15576	16599	17652	18969	19565	20142
Gujarat - PGVCL	31654	34594	36725	39549	42669	46005	49578	53324	58197	60175	62114
Gujarat - Torrent	11293	12351	12755	13197	13655	14129	14635	15181	15836	16421	16988
Gujarat - UGVCL	26506	31692	33893	36589	39558	42767	46225	49904	54474	57127	59802
<b>Gujarat</b>	<b>106030</b>	<b>119759</b>	<b>127240</b>	<b>136487</b>	<b>146730</b>	<b>157432</b>	<b>168851</b>	<b>180823</b>	<b>195946</b>	<b>203702</b>	<b>211454</b>
MP - Central Zone	21626	25106	26772	28730	30842	33878	36297	38817	41787	43689	45475
MP - Eastern Zone	18618	21559	23037	24775	26653	28803	30953	33207	35814	37919	39963
MP - Western Zone	25415	28953	30881	33181	35673	39271	42137	45127	48682	51199	53589
<b>Madhya Pradesh</b>	<b>65659</b>	<b>75617</b>	<b>80690</b>	<b>86686</b>	<b>93168</b>	<b>101952</b>	<b>109387</b>	<b>117151</b>	<b>126284</b>	<b>132807</b>	<b>139026</b>

**Table 2.12 (contd.) – Discom Wise Electrical Energy Consumption (in MU)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Maharashtra - Adani	10869	11383	11814	12277	12654	13151	13577	14046	14584	15205	15823
Maharashtra - BEST	4561	4629	4695	4760	4824	4886	4950	5019	5101	5199	5279
Maharashtra - MSEDCCL	120153	128590	133976	140356	147129	154952	162460	170188	179584	184910	189859
Maharashtra - Tata Power	5274	5419	5509	5607	5706	5802	5898	5995	6113	6202	6269
<b>Maharashtra</b>	<b>144417</b>	<b>153903</b>	<b>160888</b>	<b>168594</b>	<b>177214</b>	<b>186319</b>	<b>195081</b>	<b>204087</b>	<b>215376</b>	<b>222080</b>	<b>228230</b>
Western Region	354923	393021	415215	441303	470031	502208	533651	566416	606752	630958	654429
AP - APCPDCL	14961	15854	16838	17947	19121	20388	21679	23015	24515	25737	26933
AP - APEPDCL	22115	23951	26075	28619	31427	34509	37825	41382	45638	48693	51784
AP - APSPDCL	23419	24718	26220	28017	29967	32119	34344	36684	39451	41355	43261
<b>Andhra Pradesh</b>	<b>60495</b>	<b>64523</b>	<b>69133</b>	<b>74583</b>	<b>80515</b>	<b>87016</b>	<b>93847</b>	<b>101081</b>	<b>109604</b>	<b>115785</b>	<b>121978</b>
Karnataka - BESCOM	30314	31248	32281	33489	34754	36366	37770	39193	40868	42024	43105
Karnataka - CESC	7135	7496	7885	8313	8759	9350	9871	10416	11024	11597	12165
Karnataka - GESCOM	7288	7489	7715	7986	8269	8603	8974	9297	9693	9952	10178
Karnataka - HESCOM	12087	12514	12983	13515	14075	14843	15489	16159	16936	17575	18189
Karnataka - MESCOM	5571	5831	6114	6433	6770	7186	7570	7974	8442	8869	9272
<b>Karnataka</b>	<b>62575</b>	<b>64772</b>	<b>67224</b>	<b>70017</b>	<b>72975</b>	<b>76726</b>	<b>80085</b>	<b>83482</b>	<b>87467</b>	<b>90548</b>	<b>93460</b>
Kerala	23061	24255	25534	26940	28418	29968	31596	33317	35314	37034	38683
Lakshadweep	51	52	54	56	58	60	62	65	67	69	71
Puducherry	2530	2658	2740	2832	2924	3022	3120	3224	3345	3438	3514
<b>Tamil Nadu</b>	<b>92625</b>	<b>97905</b>	<b>103612</b>	<b>109939</b>	<b>116621</b>	<b>123683</b>	<b>131072</b>	<b>138850</b>	<b>147762</b>	<b>155466</b>	<b>163156</b>
Telangana - TSNPDCL	19677	20434	21550	22769	24057	25488	26918	28408	30065	31452	32809
Telangana - TSSPDCL	43003	44372	47090	50197	53504	57090	60747	64538	68884	72007	75000
<b>Telangana</b>	<b>62680</b>	<b>64806</b>	<b>68640</b>	<b>72966</b>	<b>77561</b>	<b>82578</b>	<b>87665</b>	<b>92946</b>	<b>98949</b>	<b>103459</b>	<b>107809</b>
<b>Southern Region</b>	<b>304017</b>	<b>318971</b>	<b>336938</b>	<b>357333</b>	<b>379071</b>	<b>403054</b>	<b>427448</b>	<b>452965</b>	<b>482509</b>	<b>505798</b>	<b>528672</b>
<b>A&amp;N</b>	<b>267</b>	<b>276</b>	<b>284</b>	<b>292</b>	<b>300</b>	<b>308</b>	<b>315</b>	<b>322</b>	<b>330</b>	<b>338</b>	<b>345</b>
Bihar - NBPDCCL	11679	13611	14750	15993	17330	18760	20288	21910	23663	25377	27072
Bihar - SBPDCL	13340	15639	17148	18834	20669	22653	24794	27088	29618	32033	34470
<b>Bihar</b>	<b>27026</b>	<b>31440</b>	<b>34658</b>	<b>37982</b>	<b>41892</b>	<b>45659</b>	<b>49703</b>	<b>53983</b>	<b>58917</b>	<b>63368</b>	<b>67699</b>
<b>DVC</b>	<b>16132</b>	<b>17096</b>	<b>18196</b>	<b>19498</b>	<b>20904</b>	<b>22395</b>	<b>23981</b>	<b>25646</b>	<b>27629</b>	<b>28932</b>	<b>30277</b>
Jharkhand - JBVNL	10194	10908	11701	12605	13578	14645	15753	16923	18260	19341	20410
Jharkhand - TSL	2318	2359	2431	2554	2693	2840	2997	3158	3405	3464	3520
Jharkhand - TSUSIL	655	690	738	808	887	975	1073	1178	1330	1384	1438
<b>Jharkhand</b>	<b>14361</b>	<b>15259</b>	<b>16512</b>	<b>17842</b>	<b>19472</b>	<b>20984</b>	<b>22571</b>	<b>24224</b>	<b>26346</b>	<b>27732</b>	<b>29068</b>
Odisha - TPCODL	6860	7438	7926	8503	9126	9786	10486	11217	12066	12719	13310
Odisha - TPNODL	6199	6638	6992	7448	7947	8475	9036	9619	10348	10723	11068
Odisha - TPSODL	3042	3186	3350	3546	3758	3980	4214	4456	4747	4928	5071
Odisha - TPWODL	8356	9323	9940	10751	11662	12655	13741	14904	16386	17190	17954
<b>Odisha</b>	<b>31619</b>	<b>35745</b>	<b>36453</b>	<b>37668</b>	<b>39171</b>	<b>40907</b>	<b>42888</b>	<b>45065</b>	<b>47928</b>	<b>49504</b>	<b>50952</b>
<b>Sikkim</b>	<b>441</b>	<b>476</b>	<b>512</b>	<b>552</b>	<b>594</b>	<b>639</b>	<b>687</b>	<b>738</b>	<b>792</b>	<b>850</b>	<b>911</b>
West Bengal - CESC	9569	10073	10409	10789	11183	11586	12000	12421	12912	13259	13580
West Bengal - IPCL	1140	1432	1673	1910	2219	2538	2903	3071	3259	3300	3359
West Bengal - WBSEDCL	32352	36730	39216	42145	45321	48714	52348	56205	60788	64099	67471
<b>West Bengal</b>	<b>43061</b>	<b>48235</b>	<b>51299</b>	<b>54844</b>	<b>58723</b>	<b>62838</b>	<b>67251</b>	<b>71697</b>	<b>76960</b>	<b>80657</b>	<b>84410</b>

**Table 2.12 (contd.) – Discom Wise Electrical Energy Consumption (in MU)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Eastern Region	132907	148527	157913	168678	181057	193731	207397	221674	238902	251380	263662
AP	470	508	550	595	644	694	746	802	863	923	978
Assam	8777	9699	10316	10994	11721	12493	13320	14206	15204	16157	17127
Manipur	732	784	839	897	961	1027	1098	1172	1253	1339	1425
Meghalaya	1654	1732	1813	1897	1984	2074	2166	2259	2355	2437	2514
Mizoram	661	726	798	875	958	1046	1142	1241	1347	1455	1573
Nagaland	655	689	725	761	799	839	878	920	961	1001	1027
Tripura	1051	1118	1305	1377	1455	1581	1665	1750	1841	1933	2018
North Eastern Region	13999	15256	16346	17397	18521	19754	21015	22351	23823	25244	26662
All India	1138408	1251129	1330415	1415987	1509157	1610053	1712971	1820855	1949040	2041635	2133380

Table 2.13 – Discom Wise T&amp;D Losses (in %)

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Chandigarh</b>	<b>11.88</b>	<b>11.76</b>	<b>11.64</b>	<b>11.51</b>	<b>11.36</b>	<b>11.21</b>	<b>11.05</b>	<b>10.88</b>	<b>10.70</b>	<b>10.51</b>	<b>10.32</b>
Delhi - BRPL	7.20	7.14	7.08	7.01	6.94	6.85	6.77	6.67	6.57	6.47	6.36
Delhi - BYPL	8.04	7.99	7.93	7.87	7.80	7.72	7.64	7.55	7.45	7.34	7.23
Delhi - MES	4.11	4.11	4.11	4.10	4.09	4.07	4.05	4.03	4.00	3.97	3.94
Delhi - NDMC	9.79	9.63	9.47	9.30	9.12	8.94	8.75	8.56	8.36	8.16	7.96
Delhi - TPDDL	6.80	6.79	6.77	6.76	6.75	6.73	6.72	6.71	6.69	6.68	6.67
<b>Delhi</b>	<b>9.69</b>	<b>9.67</b>	<b>9.61</b>	<b>9.55</b>	<b>9.47</b>	<b>9.40</b>	<b>9.33</b>	<b>9.25</b>	<b>9.17</b>	<b>9.09</b>	<b>9.00</b>
Haryana - DHBVN	15.82	15.56	15.29	15.01	14.72	14.42	14.11	13.79	13.47	13.14	12.81
Haryana - UHBVN	18.15	17.73	17.29	16.83	16.37	15.89	15.40	14.90	14.40	13.89	13.38
<b>Haryana</b>	<b>18.59</b>	<b>18.27</b>	<b>17.90</b>	<b>17.54</b>	<b>17.15</b>	<b>16.79</b>	<b>16.41</b>	<b>16.03</b>	<b>15.63</b>	<b>15.24</b>	<b>14.85</b>
<b>Himachal Pradesh</b>	<b>14.38</b>	<b>14.30</b>	<b>14.22</b>	<b>14.12</b>	<b>14.01</b>	<b>13.89</b>	<b>13.75</b>	<b>13.61</b>	<b>13.46</b>	<b>13.29</b>	<b>13.12</b>
J&K - JPDCL	36.74	34.88	33.12	31.45	29.87	28.36	26.93	25.57	24.28	23.06	21.89
J&K - KPDC	54.33	51.15	38.50	29.87	19.59	13.69	13.46	13.22	13.00	12.79	12.69
<b>J&amp;K</b>	<b>48.16</b>	<b>45.47</b>	<b>37.76</b>	<b>32.17</b>	<b>25.77</b>	<b>21.87</b>	<b>21.06</b>	<b>20.28</b>	<b>19.56</b>	<b>18.88</b>	<b>18.32</b>
<b>Ladakh</b>	<b>16.96</b>	<b>15.59</b>	<b>14.32</b>	<b>13.13</b>	<b>12.03</b>	<b>11.01</b>	<b>10.07</b>	<b>9.20</b>	<b>8.39</b>	<b>7.65</b>	<b>6.97</b>
<b>Punjab</b>	<b>17.14</b>	<b>16.96</b>	<b>16.77</b>	<b>16.56</b>	<b>16.33</b>	<b>16.09</b>	<b>15.84</b>	<b>15.57</b>	<b>15.28</b>	<b>14.99</b>	<b>14.68</b>
Rajasthan - AVVNL	16.60	16.33	16.04	15.75	15.44	15.13	14.80	14.47	14.13	13.79	13.44
Rajasthan - JVVNL	19.79	19.16	18.53	17.91	17.29	16.67	16.05	15.45	14.85	14.26	13.68
Rajasthan - JdVVNL	22.96	22.14	21.32	20.51	19.71	18.93	18.15	17.39	16.65	15.92	15.20
<b>Rajasthan</b>	<b>20.93</b>	<b>20.29</b>	<b>19.68</b>	<b>19.07</b>	<b>18.48</b>	<b>17.89</b>	<b>17.31</b>	<b>16.73</b>	<b>16.16</b>	<b>15.60</b>	<b>15.05</b>
UP - DVVNL	25.78	24.77	23.77	22.79	21.83	20.89	19.96	19.06	18.18	17.32	16.48
UP - KESCO	14.73	14.45	14.16	13.86	13.56	13.25	12.93	12.60	12.27	11.94	11.61
UP - MVVNL	20.54	19.89	19.24	18.59	17.94	17.30	16.67	16.04	15.42	14.81	14.21
UP - NPCL	11.40	11.40	11.39	11.39	11.38	11.38	11.37	11.37	11.36	11.36	11.36
UP - PuVVNL	21.57	20.90	20.23	19.56	18.89	18.23	17.57	16.92	16.27	15.64	15.01
UP - PVVNL	18.70	17.96	17.23	16.52	15.81	15.12	14.45	13.79	13.15	12.52	11.91
<b>Uttar Pradesh</b>	<b>22.43</b>	<b>21.64</b>	<b>20.91</b>	<b>20.19</b>	<b>19.48</b>	<b>18.78</b>	<b>18.09</b>	<b>17.42</b>	<b>16.76</b>	<b>16.13</b>	<b>15.50</b>
<b>Uttarakhand</b>	<b>14.89</b>	<b>14.71</b>	<b>14.53</b>	<b>14.33</b>	<b>14.13</b>	<b>13.92</b>	<b>13.69</b>	<b>13.47</b>	<b>13.23</b>	<b>12.99</b>	<b>12.74</b>
<b>Northern Region</b>	<b>20.48</b>	<b>19.83</b>	<b>19.08</b>	<b>18.38</b>	<b>17.66</b>	<b>17.05</b>	<b>16.57</b>	<b>16.09</b>	<b>15.62</b>	<b>15.15</b>	<b>14.68</b>
<b>Chhattisgarh</b>	<b>17.74</b>	<b>17.36</b>	<b>16.98</b>	<b>16.59</b>	<b>16.20</b>	<b>15.80</b>	<b>15.39</b>	<b>14.99</b>	<b>14.58</b>	<b>14.16</b>	<b>13.75</b>
<b>Dadar Nagar Haveli</b>	<b>6.83</b>										
<b>Daman &amp; Diu</b>	<b>7.36</b>										
<b>Goa</b>	<b>16.22</b>	<b>16.08</b>	<b>15.92</b>	<b>15.75</b>	<b>15.58</b>	<b>15.39</b>	<b>15.19</b>	<b>14.98</b>	<b>14.77</b>	<b>14.55</b>	<b>14.32</b>
Gujarat - DGVCL	9.88	9.73	9.56	9.39	9.21	9.03	8.84	8.64	8.44	8.24	8.03
Gujarat - MGVCL	14.04	13.81	13.56	13.31	13.04	12.77	12.49	12.21	11.92	11.62	11.32
Gujarat - PGVCL	19.67	19.56	19.44	19.30	19.14	18.97	18.77	18.56	18.33	18.09	17.83
Gujarat - Torrent	4.95	4.93	4.92	4.90	4.87	4.84	4.81	4.77	4.73	4.68	4.63
Gujarat - UGVCL	12.83	12.76	12.69	12.63	12.56	12.49	12.43	12.36	12.30	12.23	12.17
<b>Gujarat</b>	<b>14.35</b>	<b>14.19</b>	<b>14.07</b>	<b>13.97</b>	<b>13.85</b>	<b>13.74</b>	<b>13.62</b>	<b>13.49</b>	<b>13.35</b>	<b>13.17</b>	<b>12.98</b>
MP - Central Zone	28.23	27.29	26.33	25.37	24.41	23.45	22.48	21.53	20.58	19.65	18.73
MP - Eastern Zone	26.53	25.63	24.74	23.85	22.97	22.10	21.24	20.40	19.56	18.74	17.94
MP - Western Zone	13.92	13.85	13.76	13.66	13.54	13.40	13.24	13.08	12.89	12.69	12.48
<b>Madhya Pradesh</b>	<b>24.11</b>	<b>23.51</b>	<b>22.86</b>	<b>22.20</b>	<b>21.54</b>	<b>20.87</b>	<b>20.22</b>	<b>19.57</b>	<b>18.93</b>	<b>18.29</b>	<b>17.66</b>

**Table 2.13 (contd.) – Discom Wise T&D Losses (in %)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Maharashtra - Adani	10.38	10.35	10.31	10.28	10.24	10.21	10.18	10.15	10.11	10.08	10.05
Maharashtra - BEST	7.87	7.86	7.85	7.84	7.83	7.82	7.81	7.80	7.80	7.79	7.78
Maharashtra - MSEDCL	17.08	16.84	16.59	16.33	16.05	15.76	15.46	15.16	14.84	14.51	14.18
Maharashtra - Tata Power	4.16	4.16	4.15	4.15	4.15	4.14	4.14	4.13	4.13	4.13	4.12
<b>Maharashtra</b>	<b>16.43</b>	<b>16.26</b>	<b>15.98</b>	<b>15.74</b>	<b>15.45</b>	<b>15.20</b>	<b>14.95</b>	<b>14.68</b>	<b>14.39</b>	<b>14.10</b>	<b>13.81</b>
<b>Western Region</b>	<b>17.27</b>	<b>17.04</b>	<b>16.73</b>	<b>16.44</b>	<b>16.13</b>	<b>15.85</b>	<b>15.54</b>	<b>15.23</b>	<b>14.91</b>	<b>14.58</b>	<b>14.25</b>
AP - APCPDCL	10.67	10.48	10.29	10.09	9.89	9.68	9.46	9.24	9.01	8.78	8.55
AP - APEPDCL	11.00	11.14	11.26	11.37	11.48	11.57	11.65	11.72	11.78	11.83	11.87
AP - APSPDCL	11.05	10.93	10.80	10.66	10.51	10.36	10.19	10.02	9.84	9.66	9.47
<b>Andhra Pradesh</b>	<b>11.61</b>	<b>11.56</b>	<b>11.52</b>	<b>11.47</b>	<b>11.41</b>	<b>11.35</b>	<b>11.29</b>	<b>11.22</b>	<b>11.15</b>	<b>11.07</b>	<b>10.98</b>
Karnataka - BESCOM	13.38	13.15	12.92	12.68	12.43	12.17	11.91	11.64	11.36	11.08	10.80
Karnataka - CESC	13.10	12.83	12.54	12.24	11.92	11.60	11.27	10.93	10.59	10.24	9.89
Karnataka - GESCOM	13.21	13.17	13.12	13.04	12.94	12.83	12.69	12.54	12.37	12.19	11.99
Karnataka - HESCOM	13.79	13.70	13.60	13.48	13.35	13.21	13.06	12.90	12.72	12.54	12.34
Karnataka - MESCOM	12.73	12.59	12.44	12.28	12.10	11.90	11.70	11.48	11.26	11.02	10.77
<b>Karnataka</b>	<b>14.04</b>	<b>13.87</b>	<b>13.68</b>	<b>13.48</b>	<b>13.26</b>	<b>13.04</b>	<b>12.81</b>	<b>12.57</b>	<b>12.32</b>	<b>12.07</b>	<b>11.81</b>
<b>Kerala</b>	<b>13.39</b>	<b>13.04</b>	<b>12.69</b>	<b>12.33</b>	<b>11.97</b>	<b>11.61</b>	<b>11.24</b>	<b>10.88</b>	<b>10.52</b>	<b>10.16</b>	<b>9.80</b>
<b>Lakshadweep</b>	<b>10.17</b>	<b>9.96</b>	<b>9.74</b>	<b>9.51</b>	<b>9.28</b>	<b>9.05</b>	<b>8.81</b>	<b>8.58</b>	<b>8.33</b>	<b>8.09</b>	<b>7.85</b>
<b>Puducherry</b>	<b>12.99</b>	<b>12.81</b>	<b>12.63</b>	<b>12.44</b>	<b>12.24</b>	<b>12.04</b>	<b>11.83</b>	<b>11.62</b>	<b>11.40</b>	<b>11.18</b>	<b>10.95</b>
<b>Tamil Nadu</b>	<b>15.73</b>	<b>15.44</b>	<b>15.14</b>	<b>14.83</b>	<b>14.50</b>	<b>14.16</b>	<b>13.81</b>	<b>13.45</b>	<b>13.08</b>	<b>12.71</b>	<b>12.33</b>
Telangana - TSNPDCL	11.03	11.01	10.98	10.94	10.89	10.82	10.75	10.66	10.57	10.46	10.35
Telangana - TSSPDCL	10.23	10.16	10.07	9.98	9.88	9.77	9.65	9.52	9.39	9.25	9.10
<b>Telangana</b>	<b>11.56</b>	<b>11.50</b>	<b>11.44</b>	<b>11.36</b>	<b>11.27</b>	<b>11.18</b>	<b>11.07</b>	<b>10.96</b>	<b>10.83</b>	<b>10.70</b>	<b>10.57</b>
<b>Southern Region</b>	<b>13.54</b>	<b>13.37</b>	<b>13.17</b>	<b>12.97</b>	<b>12.76</b>	<b>12.54</b>	<b>12.32</b>	<b>12.09</b>	<b>11.86</b>	<b>11.62</b>	<b>11.38</b>
<b>A&amp;N</b>	<b>20.88</b>	<b>19.91</b>	<b>18.96</b>	<b>18.03</b>	<b>17.14</b>	<b>16.27</b>	<b>15.43</b>	<b>14.61</b>	<b>13.83</b>	<b>13.07</b>	<b>12.34</b>
Bihar - NBPDCCL	23.15	22.39	21.64	20.89	20.14	19.40	18.67	17.95	17.23	16.53	15.84
Bihar - SBPDCL	27.20	26.46	25.72	24.96	24.21	23.45	22.69	21.94	21.19	20.44	19.70
<b>Bihar</b>	<b>25.42</b>	<b>24.81</b>	<b>23.93</b>	<b>23.17</b>	<b>22.31</b>	<b>21.62</b>	<b>20.94</b>	<b>20.28</b>	<b>19.56</b>	<b>18.92</b>	<b>18.31</b>
<b>DVC</b>	<b>3.00</b>										
Jharkhand - JBVNL	27.27	26.32	25.37	24.41	23.45	22.49	21.54	20.60	19.67	18.75	17.84
Jharkhand - TSL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Jharkhand - TSUSIL	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
<b>Jharkhand</b>	<b>21.76</b>	<b>21.08</b>	<b>20.14</b>	<b>19.31</b>	<b>18.34</b>	<b>17.59</b>	<b>16.83</b>	<b>16.10</b>	<b>15.28</b>	<b>14.63</b>	<b>14.00</b>
Odisha - TPCODL	24.83	24.01	23.20	22.39	21.58	20.78	20.00	19.22	18.45	17.69	16.95
Odisha - TPNODL	17.02	16.99	16.94	16.87	16.78	16.68	16.56	16.43	16.28	16.12	15.94
Odisha - TPSODL	24.91	23.98	23.06	22.16	21.26	20.38	19.52	18.67	17.85	17.04	16.25
Odisha - TPWODL	18.66	17.72	16.81	15.93	15.08	14.26	13.47	12.71	11.99	11.29	10.62
<b>Odisha</b>	<b>17.54</b>	<b>16.99</b>	<b>16.36</b>	<b>16.26</b>	<b>16.10</b>	<b>15.87</b>	<b>15.59</b>	<b>15.26</b>	<b>14.89</b>	<b>14.49</b>	<b>14.06</b>
<b>Sikkim</b>	<b>28.39</b>	<b>27.01</b>	<b>25.67</b>	<b>24.38</b>	<b>23.14</b>	<b>21.94</b>	<b>20.79</b>	<b>19.68</b>	<b>18.63</b>	<b>17.61</b>	<b>16.64</b>
West Bengal - CESC	12.41	12.33	12.23	12.13	12.01	11.88	11.74	11.60	11.44	11.27	11.09
West Bengal - IPCL	5.89	5.87	5.85	5.84	5.82	5.81	5.79	5.78	5.76	5.75	5.73
West Bengal - WBSEDCL	22.26	21.60	20.95	20.29	19.64	18.98	18.33	17.68	17.04	16.40	15.78
<b>West Bengal</b>	<b>20.29</b>	<b>19.83</b>	<b>19.30</b>	<b>18.77</b>	<b>18.24</b>	<b>17.70</b>	<b>17.16</b>	<b>16.65</b>	<b>16.14</b>	<b>15.63</b>	<b>15.12</b>

**Table 2.13 (contd.) – Discom Wise T&D Losses (in %)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Eastern Region	19.23	18.83	18.26	17.81	17.31	16.84	16.36	15.88	15.36	14.89	14.42
AP	46.27	44.58	42.89	41.21	39.54	37.88	36.25	34.63	33.04	31.49	29.97
Assam	19.25	18.99	18.64	18.28	17.92	17.54	17.16	16.77	16.38	15.98	15.57
Manipur	28.89	28.04	27.18	26.33	25.49	24.65	23.82	23.00	22.18	21.38	20.60
Meghalaya	26.93	26.28	25.62	24.93	24.22	23.51	22.78	22.04	21.30	20.55	19.80
Mizoram	19.65	19.01	18.38	17.73	17.10	16.46	15.83	15.20	14.59	13.98	13.39
Nagaland	24.52	24.23	23.92	23.59	23.25	22.89	22.52	22.13	21.73	21.32	20.89
Tripura	33.68	32.74	31.79	30.81	29.83	28.83	27.82	26.81	25.80	24.79	23.79
North Eastern Region	23.55	22.93	22.44	21.85	21.26	20.68	20.07	19.46	18.86	18.25	17.64
All India	17.60	17.30	16.86	16.44	16.00	15.61	15.24	14.88	14.50	14.13	13.76

**Table 2.14 – Discom Wise Electrical Energy Requirement (in MU)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Chandigarh</b>	<b>1550</b>	<b>1676</b>	<b>1720</b>	<b>1763</b>	<b>1803</b>	<b>1844</b>	<b>1885</b>	<b>1927</b>	<b>1975</b>	<b>2033</b>	<b>2081</b>
Delhi - BRPL	12673	15062	15863	16710	17606	18554	19562	20637	21795	23033	24345
Delhi - BYPL	6506	7428	7661	7893	8123	8351	8575	8795	9015	9223	9414
Delhi - MES	236	241	246	250	255	260	265	270	277	284	291
Delhi - NDMC	1096	1286	1368	1395	1421	1447	1474	1503	1534	1570	1602
Delhi - TPDDL	9937	10486	10882	11333	11808	12304	12825	13375	14037	14514	14975
<b>Delhi</b>	<b>31527</b>	<b>35715</b>	<b>37346</b>	<b>39000</b>	<b>40771</b>	<b>42566</b>	<b>44448</b>	<b>46425</b>	<b>48641</b>	<b>50702</b>	<b>52792</b>
Haryana - DHBVN	30899	34919	37431	40328	43455	46791	50344	54107	58438	61920	65589
Haryana - UHBVN	22986	25925	27385	29166	31116	33319	35596	38025	41036	42947	44908
<b>Haryana</b>	<b>55535</b>	<b>62706</b>	<b>66926</b>	<b>71821</b>	<b>77217</b>	<b>82981</b>	<b>89050</b>	<b>95486</b>	<b>103176</b>	<b>108782</b>	<b>114636</b>
<b>Himachal Pradesh</b>	<b>12115</b>	<b>12614</b>	<b>13172</b>	<b>13829</b>	<b>14522</b>	<b>15238</b>	<b>15979</b>	<b>16730</b>	<b>17628</b>	<b>18222</b>	<b>18807</b>
J&K - JPDCL	7958	8202	8476	8780	9106	9445	9793	10135	10469	10733	11020
J&K - KPDC	10913	10906	11848	12101	12183	12534	13352	14194	15051	15867	16611
<b>J&amp;K</b>	<b>19324</b>	<b>19568</b>	<b>20811</b>	<b>21382</b>	<b>21800</b>	<b>22507</b>	<b>23700</b>	<b>24912</b>	<b>26132</b>	<b>27239</b>	<b>28294</b>
<b>Ladakh</b>	<b>190</b>	<b>210</b>	<b>233</b>	<b>259</b>	<b>288</b>	<b>321</b>	<b>357</b>	<b>398</b>	<b>443</b>	<b>494</b>	<b>551</b>
<b>Punjab</b>	<b>62851</b>	<b>66464</b>	<b>69686</b>	<b>73493</b>	<b>77571</b>	<b>81959</b>	<b>86536</b>	<b>91359</b>	<b>97237</b>	<b>101061</b>	<b>104928</b>
Rajasthan - AVVNL	24377	26749	28483	30485	32297	34194	36138	38133	40469	42087	43690
Rajasthan - JVVNL	34648	42702	50087	53305	56793	60549	64520	68710	73820	77008	80160
Rajasthan - JdVVNL	29822	31096	32461	33959	35527	37218	38921	40684	42657	44334	45987
<b>Rajasthan</b>	<b>89918</b>	<b>101757</b>	<b>112368</b>	<b>119167</b>	<b>126118</b>	<b>133550</b>	<b>141260</b>	<b>149303</b>	<b>158836</b>	<b>165398</b>	<b>171883</b>
UP - DVVNL	28154	31196	32788	34609	36554	38638	40816	43109	45759	47953	50164
UP - KESCO	3728	4376	4526	4679	4833	4990	5149	5311	5474	5640	5808
UP - MVVNL	26018	30288	32213	34327	36578	38986	41527	44225	47229	50117	53059
UP - NPCL	2630	3165	3522	3981	4511	5104	5773	6507	7438	8051	8690
UP - PuVVNL	29997	35377	37281	39346	41522	43827	46237	48781	51616	54236	56830
UP - PVVNL	36787	44104	46650	49621	52820	56249	59867	63690	68176	71552	74978
<b>Uttar Pradesh</b>	<b>129580</b>	<b>151152</b>	<b>159775</b>	<b>169529</b>	<b>179967</b>	<b>191138</b>	<b>202920</b>	<b>215392</b>	<b>229712</b>	<b>241780</b>	<b>253974</b>
<b>Uttarakhand</b>	<b>15541</b>	<b>16301</b>	<b>17138</b>	<b>18087</b>	<b>19093</b>	<b>20142</b>	<b>21238</b>	<b>22374</b>	<b>23702</b>	<b>24622</b>	<b>25524</b>
<b>Northern Region</b>	<b>418188</b>	<b>468224</b>	<b>499239</b>	<b>528394</b>	<b>559218</b>	<b>592312</b>	<b>627443</b>	<b>664377</b>	<b>707554</b>	<b>740406</b>	<b>773545</b>
<b>Chhattisgarh</b>	<b>31948</b>	<b>36260</b>	<b>38528</b>	<b>41223</b>	<b>44130</b>	<b>47208</b>	<b>50475</b>	<b>53900</b>	<b>57983</b>	<b>60649</b>	<b>63436</b>
<b>Dadar Nagar Haveli</b>	<b>6848</b>	<b>7794</b>	<b>8165</b>	<b>8605</b>	<b>9072</b>	<b>9559</b>	<b>10070</b>	<b>10594</b>	<b>11225</b>	<b>11575</b>	<b>11919</b>
<b>Daman &amp; Diu</b>	<b>2615</b>	<b>2840</b>	<b>2970</b>	<b>3121</b>	<b>3277</b>	<b>3437</b>	<b>3622</b>	<b>3815</b>	<b>4042</b>	<b>4198</b>	<b>4355</b>
<b>Goa</b>	<b>4456</b>	<b>4630</b>	<b>4820</b>	<b>5038</b>	<b>5270</b>	<b>5512</b>	<b>5765</b>	<b>6032</b>	<b>6350</b>	<b>6597</b>	<b>6847</b>
Gujarat - DGVCL	26889	30498	32427	34834	37431	40151	43009	45957	49572	51417	53259
Gujarat - MGVCL	12763	14073	14822	15771	16793	17857	18969	20107	21536	22138	22714
Gujarat - PGVCL	39404	43008	45589	49009	52771	56773	61036	65478	71263	73466	75596
Gujarat - Torrent	11880	12992	13415	13876	14354	14848	15375	15941	16622	17227	17812
Gujarat - UGVCL	30408	36328	38821	41877	45241	48873	52784	56943	62111	65087	68084
<b>Gujarat</b>	<b>123788</b>	<b>139566</b>	<b>148082</b>	<b>158654</b>	<b>170323</b>	<b>182507</b>	<b>195467</b>	<b>209008</b>	<b>226141</b>	<b>234597</b>	<b>242993</b>
MP - Central Zone	30133	34527	36341	38498	40801	44253	46826	49468	52618	54372	55951
MP - Eastern Zone	25340	28988	30608	32534	34601	36976	39302	41715	44525	46667	48701
MP - Western Zone	29525	33608	35809	38430	41258	45347	48570	51915	55886	58641	61230
<b>Madhya Pradesh</b>	<b>86521</b>	<b>98863</b>	<b>104600</b>	<b>111424</b>	<b>118751</b>	<b>128844</b>	<b>137111</b>	<b>145662</b>	<b>155770</b>	<b>162540</b>	<b>168854</b>

Table 2.14 (contd.) – Discom Wise Electrical Energy Requirement (in MU)

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Maharashtra - Adani	12128	12696	13172	13683	14098	14647	15116	15632	16225	16910	17590
Maharashtra - BEST	4950	5024	5095	5165	5233	5301	5370	5444	5532	5638	5724
Maharashtra - MSEDCCL	144907	154639	160629	167746	175261	183949	192180	200590	210874	216301	221229
Maharashtra - Tata Power	5503	5654	5747	5850	5952	6053	6153	6253	6376	6469	6539
<b>Maharashtra</b>	<b>172818</b>	<b>183777</b>	<b>191499</b>	<b>200087</b>	<b>209593</b>	<b>219726</b>	<b>229362</b>	<b>239207</b>	<b>251578</b>	<b>258529</b>	<b>264793</b>
<b>Western Region</b>	<b>428994</b>	<b>473729</b>	<b>498665</b>	<b>528152</b>	<b>560416</b>	<b>596793</b>	<b>631873</b>	<b>668218</b>	<b>713089</b>	<b>738686</b>	<b>763198</b>
AP - APCPDCL	16748	17711	18770	19962	21219	22572	23944	25358	26944	28216	29452
AP - APEPDCL	24849	26952	29384	32292	35502	39024	42814	46878	51734	55228	58758
AP - APSPDCL	26327	27750	29394	31360	33487	35830	38242	40769	43758	45775	47785
<b>Andhra Pradesh</b>	<b>68438</b>	<b>72961</b>	<b>78134</b>	<b>84245</b>	<b>90889</b>	<b>98162</b>	<b>105792</b>	<b>113859</b>	<b>123361</b>	<b>130196</b>	<b>137022</b>
Karnataka - BESCOM	34996	35980	37071	38352	39688	41407	42877	44356	46108	47262	48324
Karnataka - CESC	8210	8599	9016	9472	9945	10577	11125	11694	12330	12920	13500
Karnataka - GESCOM	8398	8625	8880	9183	9498	9869	10279	10630	11062	11334	11564
Karnataka - HESCOM	14021	14501	15026	15621	16245	17103	17816	18552	19405	20095	20751
Karnataka - MESCOM	6384	6671	6983	7333	7702	8157	8573	9008	9513	9967	10391
<b>Karnataka</b>	<b>72799</b>	<b>75202</b>	<b>77876</b>	<b>80922</b>	<b>84132</b>	<b>88232</b>	<b>91852</b>	<b>95486</b>	<b>99758</b>	<b>102973</b>	<b>105970</b>
Kerala	26626	27892	29244	30729	32281	33903	35597	37384	39464	41220	42885
Lakshadweep	56	58	60	62	64	66	68	71	73	75	77
Puducherry	2907	3048	3136	3234	3332	3436	3539	3647	3776	3870	3947
<b>Tamil Nadu</b>	<b>109914</b>	<b>115788</b>	<b>122102</b>	<b>129079</b>	<b>136399</b>	<b>144086</b>	<b>152074</b>	<b>160430</b>	<b>170006</b>	<b>178103</b>	<b>186106</b>
Telangana - TSNPDCL	22117	22963	24208	25566	26996	28581	30160	31799	33618	35128	36597
Telangana - TSSPDCL	47903	49388	52365	55762	59369	63271	67235	71331	76021	79343	82505
<b>Telangana</b>	<b>70871</b>	<b>73229</b>	<b>77503</b>	<b>82316</b>	<b>87414</b>	<b>92967</b>	<b>98578</b>	<b>104383</b>	<b>110971</b>	<b>115862</b>	<b>120549</b>
<b>Southern Region</b>	<b>351611</b>	<b>368179</b>	<b>388055</b>	<b>410587</b>	<b>434511</b>	<b>460853</b>	<b>487501</b>	<b>515259</b>	<b>547409</b>	<b>572299</b>	<b>596557</b>
<b>A&amp;N</b>	<b>338</b>	<b>345</b>	<b>350</b>	<b>357</b>	<b>363</b>	<b>368</b>	<b>373</b>	<b>378</b>	<b>383</b>	<b>389</b>	<b>394</b>
Bihar - NBPDCCL	15196	17538	18823	20216	21701	23276	24944	26702	28589	30403	32168
Bihar - SBPDCL	18325	21267	23084	25099	27271	29593	32072	34702	37580	40263	42926
<b>Bihar</b>	<b>36239</b>	<b>41814</b>	<b>45560</b>	<b>49438</b>	<b>53920</b>	<b>58256</b>	<b>62871</b>	<b>67715</b>	<b>73241</b>	<b>78155</b>	<b>82876</b>
<b>DVC</b>	<b>16630</b>	<b>17624</b>	<b>18757</b>	<b>20100</b>	<b>21550</b>	<b>23087</b>	<b>24721</b>	<b>26437</b>	<b>28482</b>	<b>29825</b>	<b>31211</b>
Jharkhand - JBVNL	14016	14804	15678	16675	17737	18895	20079	21314	22730	23805	24843
Jharkhand - TSL	2390	2432	2506	2633	2776	2928	3090	3256	3510	3571	3629
Jharkhand - TSUSIL	667	703	752	823	904	993	1093	1200	1355	1409	1465
<b>Jharkhand</b>	<b>18355</b>	<b>19334</b>	<b>20677</b>	<b>22112</b>	<b>23846</b>	<b>25463</b>	<b>27140</b>	<b>28873</b>	<b>31096</b>	<b>32484</b>	<b>33799</b>
Odisha - TPCODL	9126	9788	10320	10955	11637	12354	13107	13886	14795	15454	16027
Odisha - TPNODL	7470	7996	8418	8959	9550	10172	10830	11510	12360	12784	13166
Odisha - TPSODL	4052	4191	4354	4555	4773	4999	5236	5480	5778	5940	6055
Odisha - TPWODL	10274	11331	11949	12788	13734	14761	15881	17075	18617	19376	20086
<b>Odisha</b>	<b>38344</b>	<b>43060</b>	<b>43582</b>	<b>44985</b>	<b>46689</b>	<b>48627</b>	<b>50810</b>	<b>53180</b>	<b>56316</b>	<b>57891</b>	<b>59286</b>
<b>Sikkim</b>	<b>616</b>	<b>651</b>	<b>689</b>	<b>730</b>	<b>773</b>	<b>819</b>	<b>867</b>	<b>919</b>	<b>974</b>	<b>1032</b>	<b>1093</b>
West Bengal - CESC	10925	11489	11860	12278	12710	13148	13597	14051	14580	14943	15275
West Bengal - IPCL	1211	1522	1777	2028	2356	2694	3082	3259	3458	3501	3563
West Bengal - WBSEDCL	41614	46851	49609	52874	56395	60127	64097	68278	73274	76677	80108
<b>West Bengal</b>	<b>54020</b>	<b>60163</b>	<b>63564</b>	<b>67518</b>	<b>71820</b>	<b>76352</b>	<b>81182</b>	<b>86018</b>	<b>91771</b>	<b>95599</b>	<b>99443</b>

**Table 2.14 (contd.) – Discom Wise Electrical Energy Requirement (in MU)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Eastern Region	164542	182992	193179	205240	218961	232971	247963	263519	282264	295375	308103
AP	875	916	964	1012	1064	1117	1170	1227	1289	1347	1397
Assam	10869	11972	12679	13454	14279	15151	16079	17069	18183	19230	20285
Manipur	1029	1089	1152	1218	1289	1363	1441	1522	1610	1703	1794
Meghalaya	2264	2350	2437	2527	2618	2711	2805	2898	2993	3067	3134
Mizoram	823	897	978	1063	1156	1252	1357	1464	1577	1691	1816
Nagaland	867	909	953	997	1041	1088	1134	1182	1228	1272	1299
Tripura	1585	1663	1913	1991	2073	2222	2306	2391	2481	2570	2648
North Eastern Region	18312	19796	21076	22261	23521	24904	26292	27752	29359	30880	32373
All India	1381646	1512918	1600214	1694634	1796627	1907835	2021072	2139125	2279676	2377646	2473776

**Table 2.15 – Discom Wise Peak Electrical Demand (in MW)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Chandigarh</b>	<b>428</b>	<b>435</b>	<b>449</b>	<b>464</b>	<b>478</b>	<b>492</b>	<b>505</b>	<b>519</b>	<b>533</b>	<b>549</b>	<b>563</b>
Delhi - BRPL	3196	3500	3702	3921	4158	4416	4697	5005	5344	5717	6131
Delhi - BYPL	1673	1772	1851	1931	2012	2096	2181	2267	2355	2444	2535
Delhi - MES	48	50	52	54	56	58	60	62	64	66	68
Delhi - NDMC	307	348	376	390	403	416	430	443	457	470	483
Delhi - TPDDL	2251	2254	2346	2448	2554	2663	2779	2901	3047	3151	3250
<b>Delhi</b>	<b>7329</b>	<b>7770</b>	<b>8164</b>	<b>8571</b>	<b>9003</b>	<b>9460</b>	<b>9948</b>	<b>10469</b>	<b>11046</b>	<b>11615</b>	<b>12222</b>
Haryana - DHBVN	6250	6673	7121	7638	8193	8782	9407	10065	10823	11417	12041
Haryana - UHBVN	6069	6307	6628	6990	7372	7800	8234	8689	9217	9541	9927
<b>Haryana</b>	<b>12137</b>	<b>12788</b>	<b>13546</b>	<b>14411</b>	<b>15335</b>	<b>16337</b>	<b>17380</b>	<b>18478</b>	<b>19744</b>	<b>20648</b>	<b>21644</b>
<b>Himachal Pradesh</b>	<b>2033</b>	<b>2119</b>	<b>2215</b>	<b>2328</b>	<b>2448</b>	<b>2571</b>	<b>2699</b>	<b>2829</b>	<b>2983</b>	<b>3087</b>	<b>3190</b>
J&K - JPDCL	1403	1404	1451	1503	1559	1620	1685	1755	1830	1910	1996
J&K - KPDC	1696	1772	1930	1977	1997	2064	2211	2370	2520	2663	2790
<b>J&amp;K</b>	<b>3000</b>	<b>3075</b>	<b>3273</b>	<b>3369</b>	<b>3443</b>	<b>3566</b>	<b>3772</b>	<b>3993</b>	<b>4211</b>	<b>4427</b>	<b>4633</b>
<b>Ladakh</b>	<b>61</b>	<b>65</b>	<b>70</b>	<b>74</b>	<b>79</b>	<b>85</b>	<b>91</b>	<b>97</b>	<b>104</b>	<b>112</b>	<b>120</b>
<b>Punjab</b>	<b>13558</b>	<b>14327</b>	<b>14859</b>	<b>15502</b>	<b>16189</b>	<b>16925</b>	<b>17684</b>	<b>18478</b>	<b>19466</b>	<b>20028</b>	<b>20587</b>
Rajasthan - AVVNL	4576	4516	4801	5130	5426	5735	6052	6375	6755	7013	7268
Rajasthan - JVVNL	5961	6485	7598	8078	8597	9156	9746	10368	11127	11596	12058
Rajasthan - JdVVNL	5424	5453	5686	5941	6207	6495	6784	7083	7417	7699	7977
<b>Rajasthan</b>	<b>15803</b>	<b>16291</b>	<b>17906</b>	<b>18959</b>	<b>20030</b>	<b>21175</b>	<b>22358</b>	<b>23590</b>	<b>25048</b>	<b>26048</b>	<b>27032</b>
UP - DVVNL	7070	7226	7613	8062	8542	9058	9600	10171	10831	11387	11950
UP - KESCO	741	799	825	852	881	911	943	976	1011	1045	1080
UP - MVVNL	6556	6893	7352	7856	8394	8971	9581	10231	10956	11658	12375
UP - NPCL	509	579	646	732	831	942	1067	1205	1380	1497	1619
UP - PuVVNL	6588	6868	7250	7664	8100	8563	9048	9561	10133	10664	11192
UP - PVVNL	9349	9728	10260	10882	11550	12265	13016	13808	14739	15425	16118
<b>Uttar Pradesh</b>	<b>24991</b>	<b>26028</b>	<b>27531</b>	<b>29235</b>	<b>31061</b>	<b>33017</b>	<b>35082</b>	<b>37270</b>	<b>39781</b>	<b>41910</b>	<b>44066</b>
<b>Uttarakhand</b>	<b>2474</b>	<b>2603</b>	<b>2742</b>	<b>2905</b>	<b>3072</b>	<b>3249</b>	<b>3433</b>	<b>3623</b>	<b>3847</b>	<b>4004</b>	<b>4159</b>
<b>Northern Region</b>	<b>73367</b>	<b>77767</b>	<b>82688</b>	<b>87457</b>	<b>92476</b>	<b>97898</b>	<b>103650</b>	<b>109714</b>	<b>116745</b>	<b>122134</b>	<b>127553</b>
<b>Chhattisgarh</b>	<b>5029</b>	<b>5358</b>	<b>5708</b>	<b>6132</b>	<b>6592</b>	<b>7081</b>	<b>7602</b>	<b>8152</b>	<b>8805</b>	<b>9248</b>	<b>9713</b>
<b>Dadar Nagar Haveli</b>	<b>892</b>	<b>1021</b>	<b>1074</b>	<b>1138</b>	<b>1204</b>	<b>1273</b>	<b>1346</b>	<b>1421</b>	<b>1512</b>	<b>1565</b>	<b>1617</b>
<b>Daman &amp; Diu</b>	<b>373</b>	<b>405</b>	<b>424</b>	<b>447</b>	<b>470</b>	<b>493</b>	<b>521</b>	<b>549</b>	<b>583</b>	<b>607</b>	<b>631</b>
<b>Goa</b>	<b>703</b>	<b>740</b>	<b>778</b>	<b>818</b>	<b>859</b>	<b>901</b>	<b>945</b>	<b>989</b>	<b>1043</b>	<b>1086</b>	<b>1128</b>
Gujarat - DGVCL	4239	4695	4979	5334	5716	6115	6533	6963	7490	7749	8005
Gujarat - MGVCL	2305	2510	2631	2786	2953	3126	3305	3488	3719	3805	3887
Gujarat - PGVCL	6587	7119	7532	8081	8685	9327	10008	10717	11642	11979	12304
Gujarat - Torrent	2605	2826	2936	3055	3180	3310	3449	3599	3776	3939	4099
Gujarat - UGVCL	5056	5878	6246	6700	7198	7732	8305	8910	9666	10074	10481
<b>Gujarat</b>	<b>19457</b>	<b>21550</b>	<b>22762</b>	<b>24291</b>	<b>25953</b>	<b>27710</b>	<b>29573</b>	<b>31515</b>	<b>33964</b>	<b>35137</b>	<b>36287</b>
MP - Central Zone	5692	6096	6365	6689	7034	7569	7947	8331	8794	9019	9211
MP - Eastern Zone	4448	4795	5047	5347	5669	6039	6399	6770	7204	7527	7830
MP - Western Zone	6407	6765	7142	7596	8082	8805	9348	9905	10571	10997	11385
<b>Madhya Pradesh</b>	<b>15941</b>	<b>17009</b>	<b>17874</b>	<b>18914</b>	<b>20024</b>	<b>21592</b>	<b>22826</b>	<b>24091</b>	<b>25596</b>	<b>26534</b>	<b>27386</b>

**Table 2.15 (contd.) – Discom Wise Peak Electrical Demand (in MW)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Maharashtra - Adani	2132	2254	2360	2472	2566	2682	2779	2882	2998	3130	3263
Maharashtra - BEST	937	953	967	982	996	1011	1026	1042	1061	1085	1104
Maharashtra - MSEDCL	24566	26558	27732	29115	30582	32271	33897	35573	37601	38781	39884
Maharashtra - Tata Power	897	923	939	958	976	994	1013	1032	1054	1072	1085
<b>Maharashtra</b>	<b>28083</b>	<b>30203</b>	<b>31495</b>	<b>32999</b>	<b>34567</b>	<b>36376</b>	<b>38105</b>	<b>39891</b>	<b>42042</b>	<b>43373</b>	<b>44622</b>
<b>Western Region</b>	<b>65437</b>	<b>70963</b>	<b>74704</b>	<b>79137</b>	<b>83986</b>	<b>89457</b>	<b>94748</b>	<b>100246</b>	<b>107050</b>	<b>110981</b>	<b>114766</b>
AP - APCPDCL	2958	3141	3335	3553	3784	4033	4286	4548	4841	5079	5312
AP - APEPDCL	3994	4279	4620	5028	5476	5963	6481	7031	7689	8134	8576
AP - APSPDCL	5258	5570	5915	6326	6773	7265	7774	8310	8942	9379	9816
<b>Andhra Pradesh</b>	<b>12563</b>	<b>13363</b>	<b>14269</b>	<b>15337</b>	<b>16495</b>	<b>17758</b>	<b>19076</b>	<b>20461</b>	<b>22091</b>	<b>23243</b>	<b>24387</b>
Karnataka - BESCOM	6570	6508	6717	6961	7217	7542	7824	8108	8443	8670	8880
Karnataka - CESC	1809	1888	1982	2086	2193	2336	2461	2591	2736	2872	3005
Karnataka - GESCOM	1896	1934	1996	2069	2145	2234	2333	2418	2522	2590	2649
Karnataka - HESCOM	3082	3198	3320	3457	3602	3799	3964	4135	4333	4495	4650
Karnataka - MESCOM	1366	1426	1495	1573	1655	1756	1848	1945	2058	2160	2255
<b>Karnataka</b>	<b>14841</b>	<b>15075</b>	<b>15636</b>	<b>16277</b>	<b>16947</b>	<b>17810</b>	<b>18578</b>	<b>19352</b>	<b>20254</b>	<b>20954</b>	<b>21613</b>
<b>Kerala</b>	<b>4390</b>	<b>4592</b>	<b>4808</b>	<b>5044</b>	<b>5291</b>	<b>5549</b>	<b>5818</b>	<b>6101</b>	<b>6431</b>	<b>6707</b>	<b>6967</b>
<b>Lakshadweep</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>15</b>	<b>15</b>
<b>Puducherry</b>	<b>473</b>	<b>502</b>	<b>517</b>	<b>533</b>	<b>549</b>	<b>567</b>	<b>584</b>	<b>602</b>	<b>624</b>	<b>639</b>	<b>652</b>
<b>Tamil Nadu</b>	<b>16899</b>	<b>17361</b>	<b>18336</b>	<b>19413</b>	<b>20545</b>	<b>21736</b>	<b>22976</b>	<b>24276</b>	<b>25764</b>	<b>27033</b>	<b>28291</b>
Telangana - TSNPDCL	6269	6576	7005	7477	7980	8540	9111	9713	10384	10974	11564
Telangana - TSSPDCL	8360	8556	9201	9940	10738	11614	12528	13495	14606	15485	16361
<b>Telangana</b>	<b>14176</b>	<b>14663</b>	<b>15704</b>	<b>16877</b>	<b>18138</b>	<b>19529</b>	<b>20968</b>	<b>22488</b>	<b>24215</b>	<b>25639</b>	<b>27059</b>
<b>Southern Region</b>	<b>61165</b>	<b>63424</b>	<b>67143</b>	<b>71362</b>	<b>75861</b>	<b>80864</b>	<b>85953</b>	<b>91285</b>	<b>97440</b>	<b>102379</b>	<b>107259</b>
<b>A&amp;N</b>	<b>60</b>	<b>61</b>	<b>63</b>	<b>64</b>	<b>66</b>	<b>67</b>	<b>69</b>	<b>70</b>	<b>72</b>	<b>73</b>	<b>75</b>
Bihar - NBPDCCL	3302	3556	3836	4141	4468	4817	5189	5583	6009	6436	6884
Bihar - SBPDCL	3656	3977	4339	4742	5179	5649	6154	6694	7288	7877	8501
<b>Bihar</b>	<b>6923</b>	<b>7495</b>	<b>8184</b>	<b>8908</b>	<b>9743</b>	<b>10553</b>	<b>11416</b>	<b>12326</b>	<b>13360</b>	<b>14276</b>	<b>15159</b>
<b>DVC</b>	<b>3081</b>	<b>3248</b>	<b>3450</b>	<b>3689</b>	<b>3947</b>	<b>4220</b>	<b>4510</b>	<b>4814</b>	<b>5176</b>	<b>5409</b>	<b>5649</b>
Jharkhand - JBVNL	2322	2464	2614	2784	2967	3165	3369	3582	3827	4014	4196
Jharkhand - TSL	422	432	446	469	495	522	552	582	628	639	650
Jharkhand - TSUSIL	148	157	167	176	186	197	208	219	235	243	251
<b>Jharkhand</b>	<b>2835</b>	<b>2994</b>	<b>3163</b>	<b>3362</b>	<b>3576</b>	<b>3808</b>	<b>4048</b>	<b>4297</b>	<b>4597</b>	<b>4800</b>	<b>4997</b>
Odisha - TPCODL	1664	1789	1887	2005	2131	2263	2403	2547	2715	2838	2945
Odisha - TPNODL	1082	1157	1219	1298	1384	1475	1571	1670	1794	1857	1913
Odisha - TPSODL	698	725	754	789	828	868	910	952	1005	1034	1055
Odisha - TPWODL	1806	1999	2110	2260	2429	2613	2813	3027	3304	3441	3570
<b>Odisha</b>	<b>5645</b>	<b>6490</b>	<b>6635</b>	<b>6918</b>	<b>7252</b>	<b>7630</b>	<b>8053</b>	<b>8514</b>	<b>9107</b>	<b>9456</b>	<b>9782</b>
<b>Sikkim</b>	<b>134</b>	<b>141</b>	<b>150</b>	<b>159</b>	<b>169</b>	<b>179</b>	<b>190</b>	<b>201</b>	<b>214</b>	<b>227</b>	<b>241</b>
West Bengal - CESC	2226	2349	2427	2515	2606	2699	2794	2890	3002	3080	3151
West Bengal - IPCL	205	260	304	348	404	463	530	561	595	603	614
West Bengal - WBSEDCL	7322	8281	8777	9364	9998	10670	11386	12140	13042	13661	14287
<b>West Bengal</b>	<b>9090</b>	<b>10150</b>	<b>10726</b>	<b>11395</b>	<b>12123</b>	<b>12891</b>	<b>13708</b>	<b>14530</b>	<b>15507</b>	<b>16164</b>	<b>16824</b>

**Table 2.15 (contd.) – Discom Wise Peak Electrical Demand (in MW)**

State/ Discom	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Eastern Region	26043	28737	30479	32544	34857	37265	39847	42546	45752	48106	50420
AP	170	180	190	201	211	223	234	246	259	271	282
Assam	2138	2376	2526	2689	2861	3045	3240	3449	3683	3905	4128
Manipur	260	276	291	308	325	344	363	383	404	426	448
Meghalaya	408	424	441	457	474	492	510	528	546	561	575
Mizoram	157	170	184	199	215	231	249	268	289	309	331
Nagaland	155	163	171	179	187	195	204	213	221	230	235
Tripura	329	356	421	452	484	531	567	605	645	687	731
North Eastern Region	3437	3755	4029	4284	4556	4855	5159	5481	5835	6176	6519
All India	203115	216966	230144	244565	260118	277201	294716	313098	334811	350670	366393

## Chapter-3

### Review of 19<sup>th</sup> EPS Projections vis-a-vis Actual Achievement

This Chapter presents a comparison between the electrical energy requirement and peak electricity demand projection of 19<sup>th</sup> EPS vis-a-vis the actual electrical energy requirement and peak electricity demand observed till the year 2021-22. Comparison has also been done between 20<sup>th</sup> and 19<sup>th</sup> EPS projections.

#### 3.1 Electricity demand projection as per 19<sup>th</sup> EPS:

The projection of electrical energy requirement and peak electricity demand on all-India basis as per the 19<sup>th</sup> EPS Report is summarised in Table 3.1.

Table 3.1: Electrical Energy Requirement & Peak Electricity Demand as per 19<sup>th</sup> EPS Report (on all-India basis)

Year	Electrical Energy Requirement (in MU)	Peak Electricity Demand (in MW)
2016-17	11,60,429	1,61,834
2017-18	12,40,760	1,76,897
2018-19	13,17,962	1,88,360
2019-20	13,99,913	2,00,696
2020-21	14,83,257	2,13,244
2021-22	15,66,023	2,25,751
2022-23	16,50,594	2,38,899
2023-24	17,39,168	2,52,288
2024-25	18,36,001	2,66,844
2025-26	19,39,111	2,82,418
2026-27	20,47,434	2,98,774

#### 3.2 19<sup>th</sup> EPS Forecast Vs Actual

The actual growth of electrical energy requirement and peak electricity demand in the country has been less as compared to the 19<sup>th</sup> EPS forecasts. Comparative Tables of 19<sup>th</sup> EPS projections vs actual electrical energy requirement and peak demand observed on all-India basis are given in Table 3.2 & Table 3.3 respectively.

Table 3.2: Comparison of projected electrical energy requirement as per 19<sup>th</sup> EPS vs actual on all-India basis

Year	19 <sup>th</sup> EPS Projections	Actual	Difference (19 <sup>th</sup> EPS Forecast - Actual)	
	(in MUs)	( in MUs)	( in MUs)	( in % )
2016-17	11,60,429	11,42,928	17,501	1.51
2017-18	12,40,760	12,13,326	27,434	2.21
2018-19	13,17,962	12,74,595	43,367	3.29
2019-20	13,99,913	12,91,010	1,08,903	7.78
2020-21	14,83,257	12,75,534	2,07,723	14.00
2021-22	15,66,023	13,75,663	1,90,360	12.16

Figure 3.1: Performance of 19<sup>th</sup> EPS Forecast (Energy Requirement)

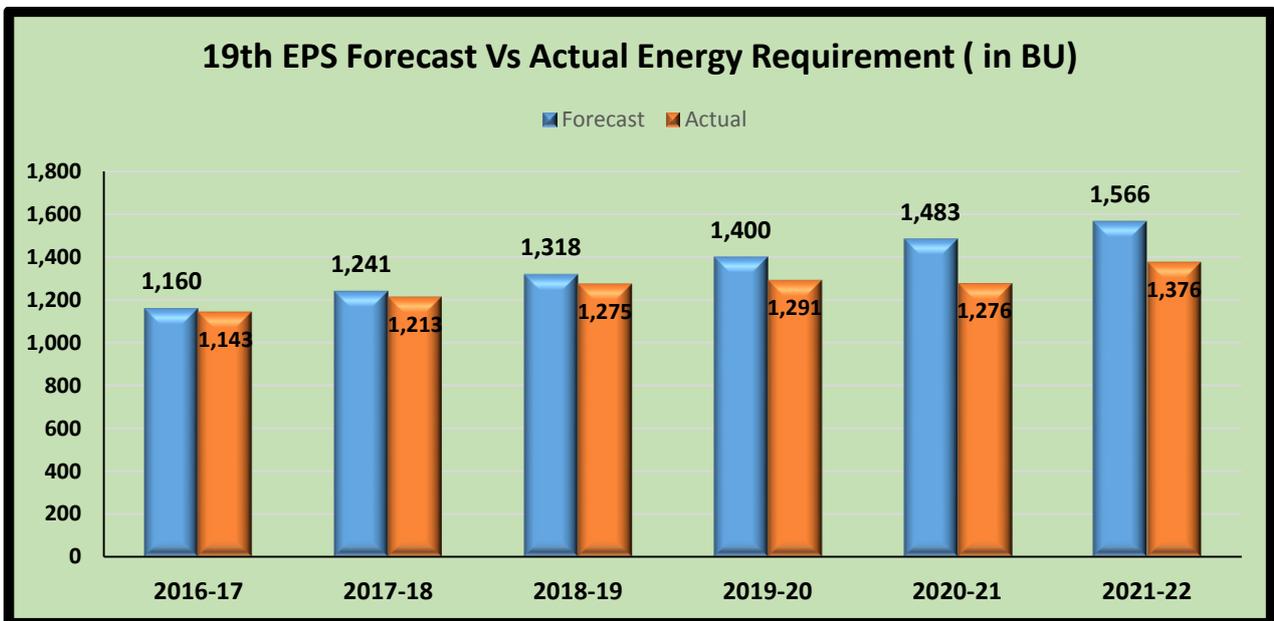
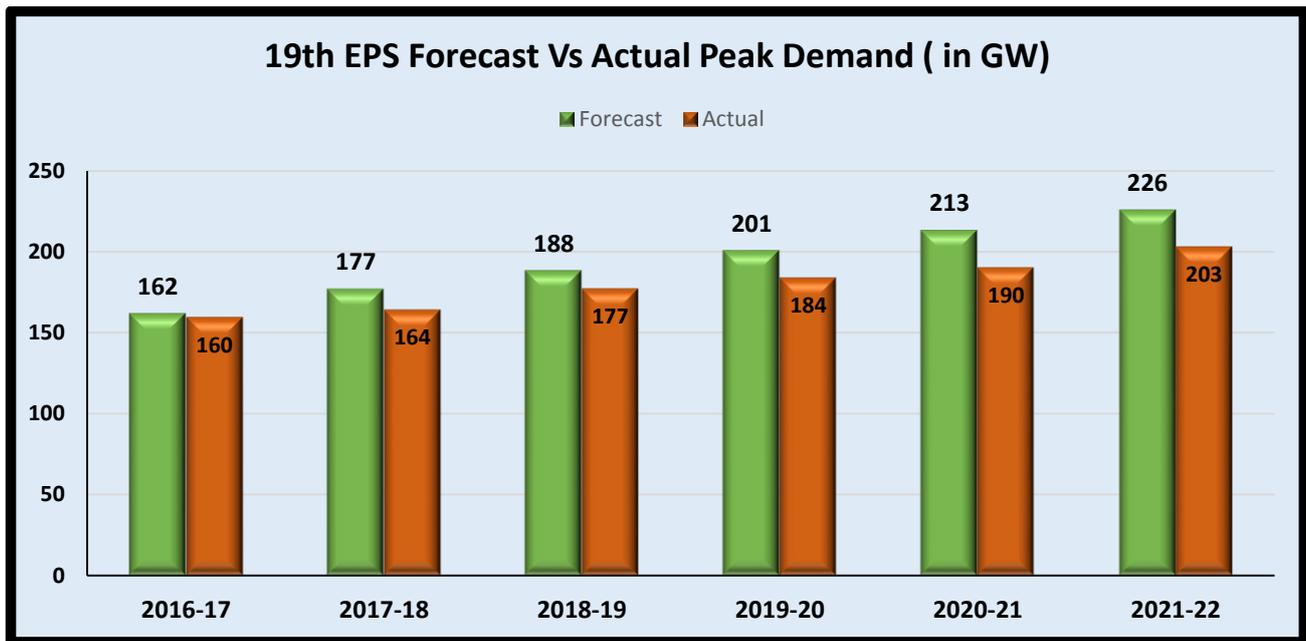


Table 3.3: Comparison of projected peak electricity demand as per 19<sup>th</sup> EPS vs actual on all-India basis

Year	19 <sup>th</sup> EPS Projections	Actual	Difference (19 <sup>th</sup> EPS Forecast - Actual)	
	(in MW)	( in MW)	( in MW)	( in % )
2016-17	1,61,834	1,59,542	2,292	1.42
2017-18	1,76,897	1,64,066	12,831	7.25
2018-19	1,88,360	1,77,022	11,338	6.02
2019-20	2,00,696	1,83,804	16,892	8.42
2020-21	2,13,244	1,90,198	23,046	10.81
2021-22	2,25,751	2,03,014	22,737	10.07

Figure 3.2: Performance of 19<sup>th</sup> EPS Forecast (Peak Demand)

### 3.3 Reasons for variations

From Tables 3.2 & 3.3, it may be seen that the actual values were closer to the forecasts in the initial years. However, deviations were appreciable in the later years. The variation between the forecast and actual figures may be attributed mainly to three factors:

- i. Slower economic growth
- ii. Impact of COVID-19 pandemic.
- iii. Higher rainfall during 2019-20.

#### **Slower economic growth**

The PEUM method is a trend analysis applied to past electricity data. Therefore, it does not consider effect of GDP on power demand exclusively which inherently means that the method is based on Business As Usual (BAU) scenario. The BAU scenario prevailing around the preparation of the 19<sup>th</sup> EPS report was 7.3%. However, the country has not seen same level of GDP growth in the recent past and it has caused energy demand to stay on lower side than the forecast figure.

#### **Impact of COVID-19 on energy demand**

Huge impact on the overall electricity demand has been observed due to several intermittent severe COVID-19 waves and the preventive measures such as

imposition of lockdown taken to contain the spread of pandemic. It has significantly reduced electricity demand in the commercial and industrial sectors leading to an overall reduction of electricity demand. The actual electrical energy requirement has witnessed a negative growth rate of -1.19 % during 2020-21 as compared to 19<sup>th</sup> EPS projected growth rate of 5.95% leading to a deviation of 14 % between actual and projected figures.

**Higher rainfall during 2019-20**

Monsoon rainfall has an inverse relationship with electricity demand. Extended monsoons generally drive down the agricultural demand for electricity because of higher moisture in the soil and corresponding lesser need of water for irrigation. Also, the electricity demand of domestic consumers with respect to cooling requirements witnesses a decline leading to further decrease in total electricity demand. During 2019-20, most areas of the country have received large excess/excess/normal rainfall except a few from Northern/North Eastern regions. The country has observed about 10% & 29% more than normal rainfall during monsoon and post monsoon periods respectively. Due to such favourable weather conditions, a marginal 1.28 % increase in electricity requirement was observed compared to 2018-19. Prior to that, an average growth rate of about 4-5% was registered in the electrical energy requirement of the country.

**3.4 Comparison of 20<sup>th</sup> EPS projections with 19<sup>th</sup> EPS projections**

The summaries of 19<sup>th</sup> & 20<sup>th</sup> Projections are given in Table 3.4 & Table 3.5 below:

Table 3.4: Summary of 19<sup>th</sup> EPS Projection

Particulars	2021-22	2026-27	2031-32	2036-37	CAGR (%)		
					2021-22 to	2026-27 to	2031-32 to
					2026-27	2031-32	2036-37
<b>Energy Requirement (MU)</b>	15,66,023	20,47,434	25,30,531	30,49,478	5.51	4.33	3.80
<b>Peak Demand (MW)</b>	2,25,751	2,98,774	3,70,462	4,47,702	5.77	4.40	3.86

Table 3.5: Summary of 20<sup>th</sup> EPS Projection

Particulars	2021-22	2026-27	2031-32	2036-37	CAGR (%)		
					2021-22 to	2026-27 to	2031-32 to
					2026-27	2031-32	2036-37
Energy Requirement (MU)	13,81,646	19,07,835	24,73,776	30,95,487	6.67	5.33	4.59
Peak Demand (MW)	2,03,115	2,77,201	3,66,393	4,65,531	6.42	5.74	4.91

Figure 3.3: 19<sup>th</sup> vs 20<sup>th</sup> EPS Forecast for Energy Requirement

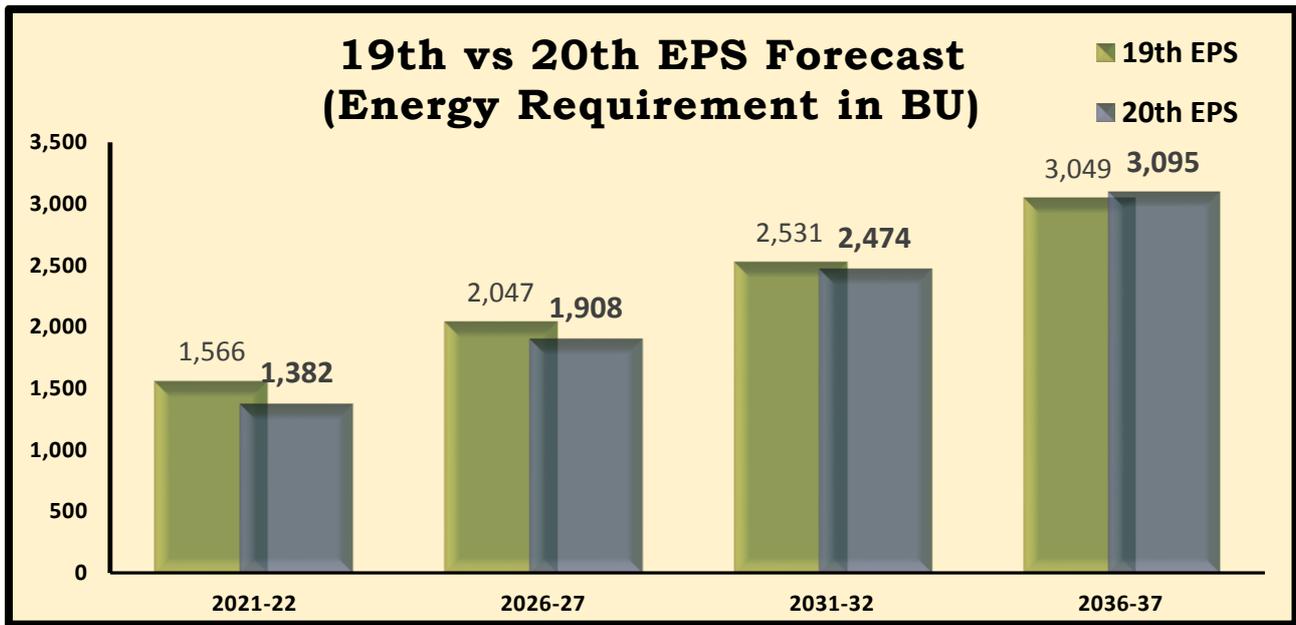
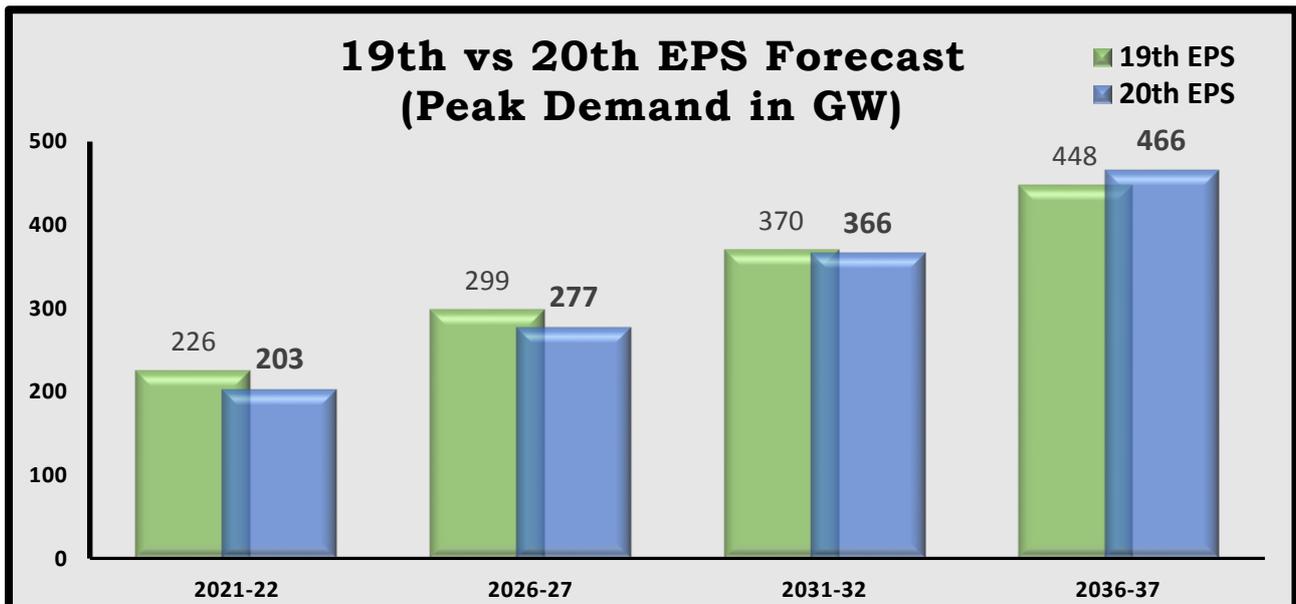


Figure 3.4: 19<sup>th</sup> vs 20<sup>th</sup> EPS Forecast for Peak Demand



As observed from above, the growth rates of 20<sup>th</sup> EPS forecast are comparatively higher than 19<sup>th</sup> EPS forecast. However, the actual quantum of Energy Requirement & Peak Demand is converging in the longer term. It is occurring because of lesser base value considered for 20<sup>th</sup> EPS in accordance with actual situations prevailing at present.

\*\*\*\*\*

**Chapter-4****Category Wise Projection of Electricity Demand on All-India & Regional Basis  
(2021-22 to 2031-32)**

This Chapter covers the projection of electricity consumption for different consumption categories viz. domestic, commercial, public lighting, public water works, irrigation, LT industries, HT industries, railway traction and bulk supply as well as electrical energy requirement, T&D losses, load factor and peak electricity demand for the regions and on all-India basis.

Category-wise projections of electrical energy consumption in different consumption categories viz. domestic, commercial, public lighting, public water works, irrigation, LT industries, HT industries, railway traction and bulk supply; T&D losses, electrical energy requirement and peak electricity demand on all-India basis for the years 2021-22 to 2031-32 is given in Table 4.1.

Region-wise details of electrical energy consumption in different consumption categories, T&D losses, electrical energy requirement and peak electricity demand for the years 2021-22 to 2031-32 are given in Tables 4.2-4.6.

State/UT-wise details of electrical energy consumption in different consumption categories viz. domestic, public lighting, commercial, public water works, irrigation, LT industries, HT industries, railway traction and bulk supply are given in Tables 4.7 - 4.16.

Table 4.1  
**ALL INDIA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Energy Consumption -MUs</b>											
1. Domestic	344998	378789	404754	431417	459565	489009	519918	552836	588169	626578	664514
2. Commercial	99277	109262	115555	122022	128855	136081	143798	152198	161510	172094	182559
3. Public lighting	9716	10167	10575	10990	11413	11844	12282	12727	13179	13638	14103
4. Public Water Works	27423	29304	30988	32755	34609	36551	38587	40720	42952	45289	47734
5. Irrigation	238672	263320	279256	291750	304367	320374	334370	348631	363211	378096	393278
6. LT Industries	53723	58604	60928	63245	65557	67842	70102	72315	74455	76495	78397
7. HT Industries	259902	284141	304277	333896	367399	403439	442531	483380	539336	556196	572500
8. Railway Traction	20108	21477	24762	27088	30816	34344	36573	38762	42221	44274	46092
9. Bulk Supply	27904	29879	31307	32800	34365	36008	37736	39559	41486	43531	45706
10.Others	56685	66184	68013	70024	72211	74562	77073	79727	82520	85445	88497
<b>Total Energy Consumption</b>	<b>1138408</b>	<b>1251129</b>	<b>1330415</b>	<b>1415987</b>	<b>1509157</b>	<b>1610053</b>	<b>1712971</b>	<b>1820855</b>	<b>1949040</b>	<b>2041635</b>	<b>2133380</b>
T&D losses -MU	224861	241580	248414	256004	263473	272303	281114	289706	300211	304234	307289
T&D losses -in %	16.49	16.18	15.73	15.31	14.86	14.47	14.10	13.73	13.35	12.97	12.59
Energy Requirement - MU	1363269	1492709	1578829	1671991	1772630	1882357	1994085	2110561	2249252	2345870	2440670
Annual Load Factor - %	77.65	79.60	79.37	79.10	78.85	78.57	78.28	77.99	77.73	77.40	77.07
Peak Demand - MW	200414	214068	227068	241298	256643	273499	290781	308917	330342	345984	361489
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>1381646</b>	<b>1512918</b>	<b>1600214</b>	<b>1694634</b>	<b>1796627</b>	<b>1907835</b>	<b>2021072</b>	<b>2139125</b>	<b>2279676</b>	<b>2377646</b>	<b>2473776</b>
<b>Peak Demand (Ex-Bus) - MW</b>	<b>203115</b>	<b>216966</b>	<b>230144</b>	<b>244565</b>	<b>260118</b>	<b>277201</b>	<b>294716</b>	<b>313098</b>	<b>334811</b>	<b>350670</b>	<b>366393</b>
<b>T&amp;D losses (Ex- Bus) -in %</b>	<b>17.60</b>	<b>17.30</b>	<b>16.86</b>	<b>16.44</b>	<b>16.00</b>	<b>15.61</b>	<b>15.24</b>	<b>14.88</b>	<b>14.50</b>	<b>14.13</b>	<b>13.76</b>
<b>Pattern of Utilization</b>											
Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	30.31	30.28	30.42	30.47	30.45	30.37	30.35	30.36	30.18	30.69	31.15
Commercial	8.72	8.73	8.69	8.62	8.54	8.45	8.39	8.36	8.29	8.43	8.56
Irrigation	20.97	21.05	20.99	20.60	20.17	19.90	19.52	19.15	18.64	18.52	18.43
Industrial	27.55	27.39	27.45	28.05	28.69	29.27	29.93	30.52	31.49	30.99	30.51
Others	12.46	12.55	12.45	12.26	12.15	12.01	11.81	11.62	11.41	11.37	11.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

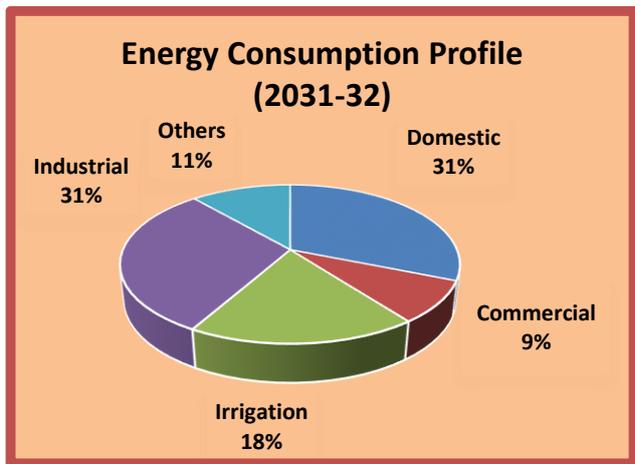
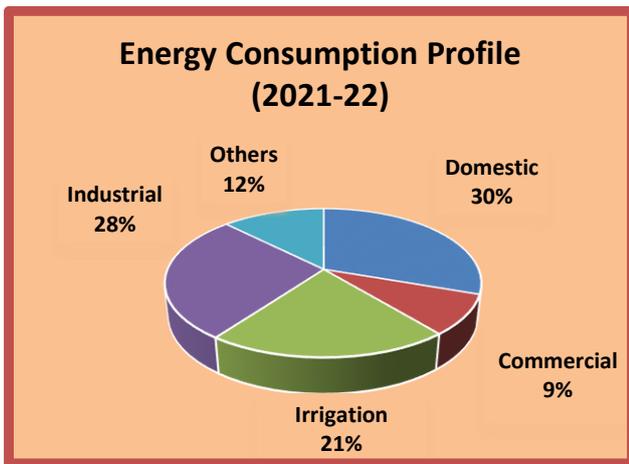


Table 4.2  
**NORTHERN REGION**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Energy Consumption -MUs</b>											
1. Domestic	119674	133545	143827	153988	164760	175863	187362	199611	212744	227007	241403
2. Commercial	30246	34594	36767	38905	41169	43541	46059	48806	51859	55347	58868
3. Public lighting	2116	2203	2292	2384	2478	2575	2674	2776	2881	2988	3099
4. Public Water Works	8897	9386	9900	10438	11002	11593	12213	12861	13539	14250	14992
5. Irrigation	74115	86389	95016	100019	104970	110498	115894	121479	127257	133231	139402
6. LT Industries	13260	14316	14748	15159	15562	15948	16314	16659	16979	17272	17542
7. HT Industries	66213	73547	78712	86273	94836	104065	114091	124680	139266	143688	148097
8. Railway Traction	2731	2867	3158	3381	3739	3949	4169	4385	4715	4918	5118
9. Bulk Supply	9165	10373	11019	11717	12473	13293	14187	15164	16235	17415	18717
10. Others	6147	8133	8563	9014	9488	9982	10498	11030	11577	12139	12717
<b>Total Energy Consumption</b>	<b>332563</b>	<b>375354</b>	<b>404003</b>	<b>431277</b>	<b>460476</b>	<b>491306</b>	<b>523460</b>	<b>557450</b>	<b>597054</b>	<b>628255</b>	<b>659956</b>
T&D losses -MU	78093	84449	86288	87651	88728	90405	92752	95035	97838	98896	99734
T&D losses -in %	19.02	18.37	17.60	16.89	16.16	15.54	15.05	14.57	14.08	13.60	13.13
Energy Requirement - MU	410655	459804	490290	518929	549204	581710	616212	652485	694892	727150	759690
Annual Load Factor - %	65.07	68.73	68.92	68.97	69.03	69.07	69.10	69.13	69.19	69.20	69.23
Peak Demand - MW	72045	76368	81206	85890	90820	96145	101795	107750	114655	119948	125269
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>418188</b>	<b>468224</b>	<b>499239</b>	<b>528394</b>	<b>559218</b>	<b>592312</b>	<b>627443</b>	<b>664377</b>	<b>707554</b>	<b>740406</b>	<b>773545</b>
<b>Peak Demand (Ex-Bus) - MW</b>	<b>73367</b>	<b>77767</b>	<b>82688</b>	<b>87457</b>	<b>92476</b>	<b>97898</b>	<b>103650</b>	<b>109714</b>	<b>116745</b>	<b>122134</b>	<b>127553</b>
<b>T&amp;D losses (Ex- Bus) -in %</b>	<b>20.48</b>	<b>19.83</b>	<b>19.08</b>	<b>18.38</b>	<b>17.66</b>	<b>17.05</b>	<b>16.57</b>	<b>16.09</b>	<b>15.62</b>	<b>15.15</b>	<b>14.68</b>
<b>Pattern of Utilization</b>											
Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	35.99	35.58	35.60	35.71	35.78	35.80	35.79	35.81	35.63	36.13	36.58
Commercial	9.09	9.22	9.10	9.02	8.94	8.86	8.80	8.76	8.69	8.81	8.92
Irrigation	22.29	23.02	23.52	23.19	22.80	22.49	22.14	21.79	21.31	21.21	21.12
Industrial	23.90	23.41	23.13	23.52	23.97	24.43	24.91	25.35	26.17	25.62	25.10
Others	8.74	8.78	8.65	8.56	8.51	8.42	8.36	8.29	8.20	8.23	8.28
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

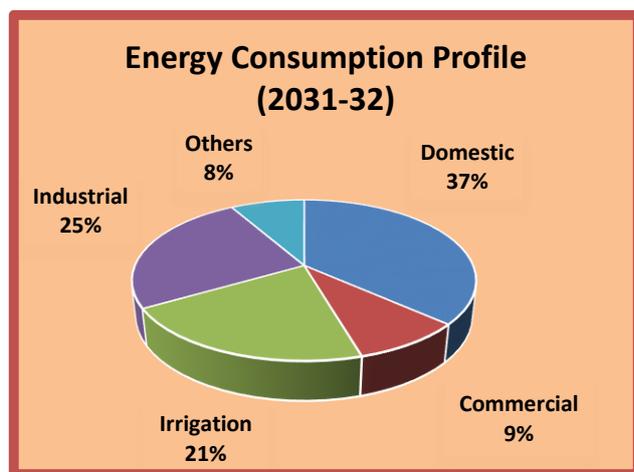
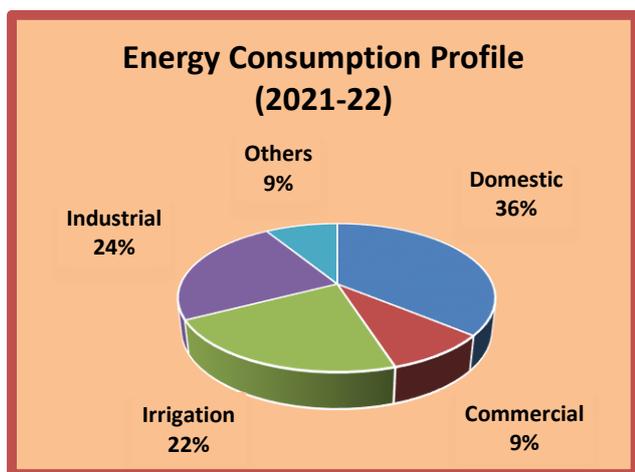


Table 4.3  
**WESTERN REGION**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Energy Consumption -MUs</b>											
1. Domestic	77003	84416	88936	93641	98548	103683	109085	114821	120992	127762	134196
2. Commercial	26423	28821	30105	31439	32835	34306	35876	37584	39484	41663	43757
3. Public lighting	2989	3139	3236	3334	3431	3529	3625	3721	3816	3910	4003
4. Public Water Works	7850	8494	8959	9447	9960	10500	11067	11663	12290	12948	13639
5. Irrigation	87938	97253	101210	105250	109367	114983	119526	124117	128746	133406	138086
6. LT Industries	22592	25319	26335	27355	28372	29378	30371	31336	32260	33123	33901
7. HT Industries	103153	114185	122488	134680	148449	163275	179356	196243	219367	226196	232806
8. Railway Traction	7539	8036	9486	10559	12301	14581	15530	16445	18006	18822	19543
9. Bulk Supply	7327	7642	7962	8287	8618	8953	9293	9636	9982	10331	10682
10. Others	12108	15716	16499	17310	18151	19021	19920	20850	21809	22797	23816
<b>Total Energy Consumption</b>	<b>354923</b>	<b>393021</b>	<b>415215</b>	<b>441303</b>	<b>470031</b>	<b>502208</b>	<b>533651</b>	<b>566416</b>	<b>606752</b>	<b>630958</b>	<b>654429</b>
T&D losses -MU	68963	75050	77494	80543	83697	87453	90671	93819	97825	98903	99646
T&D losses -in %	16.27	16.03	15.73	15.43	15.12	14.83	14.52	14.21	13.88	13.55	13.21
Energy Requirement - MU	423885	468070	492709	521846	553728	589660	624322	660235	704577	729861	754075
Annual Load Factor - %	74.84	76.21	76.20	76.19	76.17	76.16	76.13	76.09	76.04	75.98	75.91
Peak Demand - MW	64658	70116	73812	78192	82984	88388	93616	99048	105772	109655	113394
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>428994</b>	<b>473729</b>	<b>498665</b>	<b>528152</b>	<b>560416</b>	<b>596793</b>	<b>631873</b>	<b>668218</b>	<b>713089</b>	<b>738686</b>	<b>763198</b>
<b>Peak Demand (Ex-Bus) - MW</b>	<b>65437</b>	<b>70963</b>	<b>74704</b>	<b>79137</b>	<b>83986</b>	<b>89457</b>	<b>94748</b>	<b>100246</b>	<b>107050</b>	<b>110981</b>	<b>114766</b>
<b>T&amp;D losses (Ex- Bus) -in %</b>	<b>17.27</b>	<b>17.04</b>	<b>16.73</b>	<b>16.44</b>	<b>16.13</b>	<b>15.85</b>	<b>15.54</b>	<b>15.23</b>	<b>14.91</b>	<b>14.58</b>	<b>14.25</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	21.70	21.48	21.42	21.22	20.97	20.65	20.44	20.27	19.94	20.25	20.51
Commercial	7.44	7.33	7.25	7.12	6.99	6.83	6.72	6.64	6.51	6.60	6.69
Irrigation	24.78	24.74	24.38	23.85	23.27	22.90	22.40	21.91	21.22	21.14	21.10
Industrial	35.43	35.50	35.84	36.72	37.62	38.36	39.30	40.18	41.47	41.10	40.75
Others	10.65	10.95	11.11	11.09	11.16	11.27	11.14	11.00	10.86	10.91	10.95
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

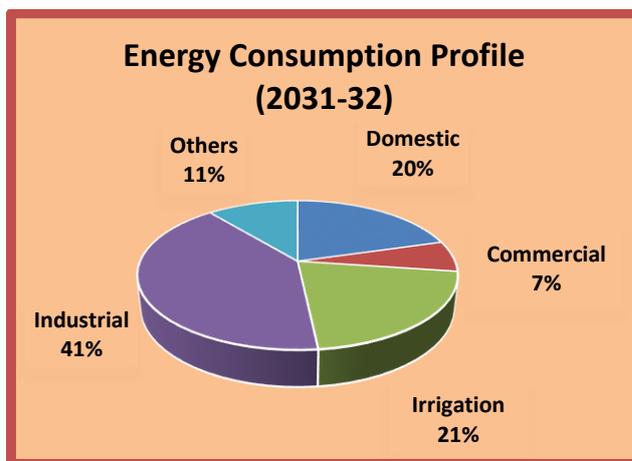
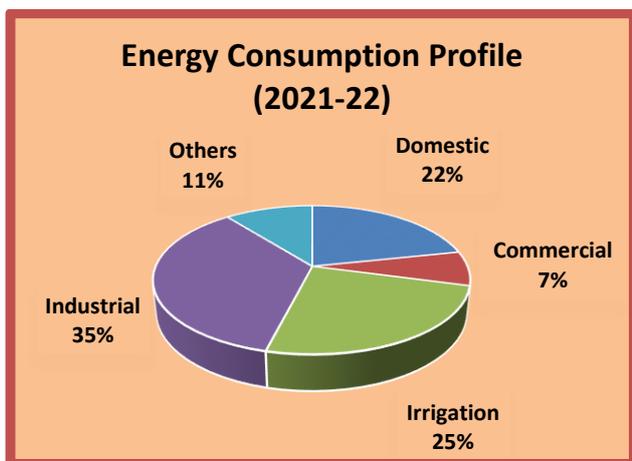


Table 4.4  
**SOUTHERN REGION**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Energy Consumption -MUs</b>											
1. Domestic	90924	96500	102850	109529	116562	123996	131887	140342	149511	159639	169655
2. Commercial	28203	29706	31424	33227	35128	37148	39315	41682	44324	47358	50344
3. Public lighting	3277	3406	3536	3666	3797	3928	4059	4189	4318	4446	4572
4. Public Water Works	8715	9260	9831	10430	11056	11711	12396	13111	13858	14637	15449
5. Irrigation	73032	75565	78651	81813	85050	89527	93203	96878	100601	104366	108168
6. LT Industries	14073	14733	15399	16070	16738	17402	18071	18737	19399	20048	20676
7. HT Industries	47387	49499	53018	58418	64541	71122	78241	85666	96001	98679	101043
8. Railway Traction	3329	3553	3770	3976	4217	4429	4648	4870	5123	5350	5572
9. Bulk Supply	9202	9557	9918	10285	10659	11038	11424	11814	12210	12611	13016
10. Others	25875	27192	28540	29918	31323	32753	34205	35676	37164	38665	40177
<b>Total Energy Consumption</b>	<b>304017</b>	<b>318971</b>	<b>336938</b>	<b>357333</b>	<b>379071</b>	<b>403054</b>	<b>427448</b>	<b>452965</b>	<b>482509</b>	<b>505798</b>	<b>528672</b>
T&D losses -MU	43500	44921	46603	48483	50396	52459	54412	56339	58583	59898	61004
T&D losses -in %	12.52	12.34	12.15	11.95	11.73	11.52	11.29	11.06	10.83	10.59	10.35
Energy Requirement - MU	347517	363892	383541	405815	429467	455514	481860	509304	541092	565696	589676
Annual Load Factor - %	65.62	66.27	65.98	65.68	65.38	65.06	64.75	64.43	64.13	63.81	63.49
Peak Demand - MW	60453	62686	66362	70533	74981	79927	84958	90230	96315	101198	106022
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>351611</b>	<b>368179</b>	<b>388055</b>	<b>410587</b>	<b>434511</b>	<b>460853</b>	<b>487501</b>	<b>515259</b>	<b>547409</b>	<b>572299</b>	<b>596557</b>
<b>Peak Demand (Ex-Bus) - MW</b>	<b>61165</b>	<b>63424</b>	<b>67143</b>	<b>71362</b>	<b>75861</b>	<b>80864</b>	<b>85953</b>	<b>91285</b>	<b>97440</b>	<b>102379</b>	<b>107259</b>
<b>T&amp;D losses (Ex- Bus) -in %</b>	<b>13.54</b>	<b>13.37</b>	<b>13.17</b>	<b>12.97</b>	<b>12.76</b>	<b>12.54</b>	<b>12.32</b>	<b>12.09</b>	<b>11.86</b>	<b>11.62</b>	<b>11.38</b>
<b>Pattern of Utilization</b>											
Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	29.91	30.25	30.52	30.65	30.75	30.76	30.85	30.98	30.99	31.56	32.09
Commercial	9.28	9.31	9.33	9.30	9.27	9.22	9.20	9.20	9.19	9.36	9.52
Irrigation	24.02	23.69	23.34	22.90	22.44	22.21	21.80	21.39	20.85	20.63	20.46
Industrial	20.22	20.14	20.31	20.85	21.44	21.96	22.53	23.05	23.92	23.47	23.02
Others	16.58	16.61	16.50	16.31	16.11	15.84	15.61	15.38	15.06	14.97	14.90
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

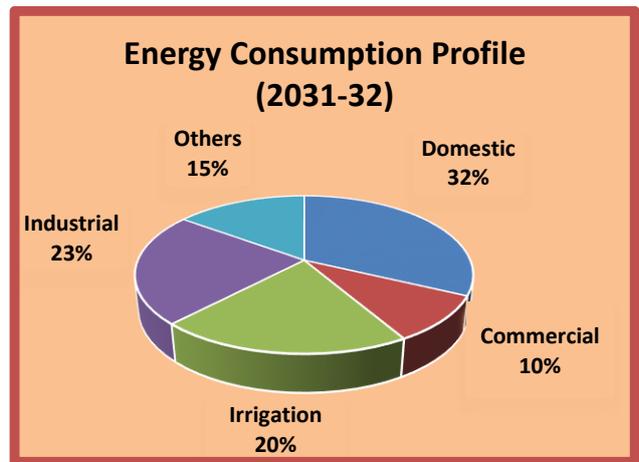
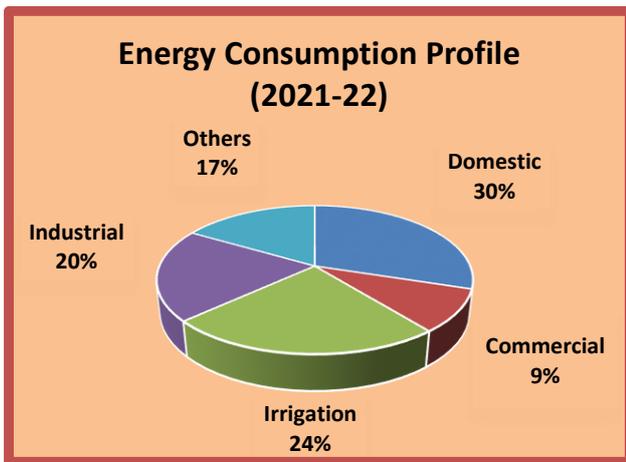


Table 4.5  
**EASTERN REGION**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Energy Consumption -MUs</b>											
1. Domestic	50747	56870	61119	65637	70435	75525	80917	86620	92641	98977	105166
2. Commercial	12771	14303	15287	16335	17453	18648	19929	21310	22806	24441	26054
3. Public lighting	1199	1279	1363	1452	1545	1644	1748	1858	1973	2095	2223
4. Public Water Works	1658	1846	1966	2094	2228	2369	2519	2676	2841	3014	3196
5. Irrigation	3493	4016	4275	4558	4865	5235	5607	6009	6448	6924	7442
6. LT Industries	3579	4002	4198	4399	4607	4820	5038	5257	5477	5696	5908
7. HT Industries	40741	44400	47427	51739	56616	61847	67527	73288	80961	83812	86649
8. Railway Traction	6509	7021	8230	9055	10441	11229	12070	12905	14220	15028	15703
9. Bulk Supply	1201	1260	1321	1385	1450	1516	1585	1656	1728	1802	1878
10. Others	11008	13530	12727	12025	11417	10896	10458	10096	9808	9591	9442
<b>Total Energy Consumption</b>	<b>132907</b>	<b>148527</b>	<b>157913</b>	<b>168678</b>	<b>181057</b>	<b>193731</b>	<b>207397</b>	<b>221674</b>	<b>238902</b>	<b>251380</b>	<b>263662</b>
T&D losses -MU	30295	32948	33648	34831	36042	37250	38438	39573	40919	41418	41736
T&D losses -in %	18.56	18.16	17.57	17.12	16.60	16.13	15.64	15.15	14.62	14.15	13.67
Energy Requirement - MU	163202	181475	191561	203509	217100	230981	245835	261246	279821	292798	305398
Annual Load Factor - %	72.12	72.69	72.35	71.99	71.71	71.37	71.04	70.70	70.43	70.09	69.76
Peak Demand - MW	25831	28499	30224	32269	34561	36947	39505	42179	45356	47687	49977
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>164542</b>	<b>182992</b>	<b>193179</b>	<b>205240</b>	<b>218961</b>	<b>232971</b>	<b>247963</b>	<b>263519</b>	<b>282264</b>	<b>295375</b>	<b>308103</b>
<b>Peak Demand (Ex-Bus) - MW</b>	<b>26043</b>	<b>28737</b>	<b>30479</b>	<b>32544</b>	<b>34857</b>	<b>37265</b>	<b>39847</b>	<b>42546</b>	<b>45752</b>	<b>48106</b>	<b>50420</b>
<b>T&amp;D losses (Ex- Bus) -in %</b>	<b>19.23</b>	<b>18.83</b>	<b>18.26</b>	<b>17.81</b>	<b>17.31</b>	<b>16.84</b>	<b>16.36</b>	<b>15.88</b>	<b>15.36</b>	<b>14.89</b>	<b>14.42</b>
<b>Pattern of Utilization</b>											
Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	38.18	38.29	38.70	38.91	38.90	38.98	39.02	39.08	38.78	39.37	39.89
Commercial	9.61	9.63	9.68	9.68	9.64	9.63	9.61	9.61	9.55	9.72	9.88
Irrigation	2.63	2.70	2.71	2.70	2.69	2.70	2.70	2.71	2.70	2.75	2.82
Industrial	33.35	32.59	32.69	33.28	33.81	34.41	34.99	35.43	36.18	35.61	35.10
Others	16.23	16.79	16.22	15.42	14.96	14.28	13.68	13.17	12.80	12.54	12.30
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

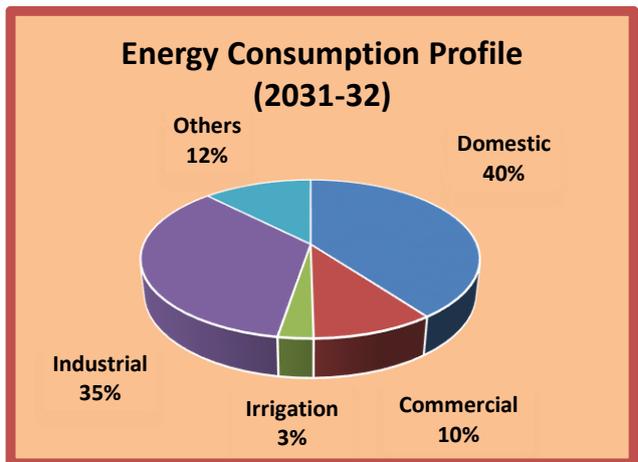
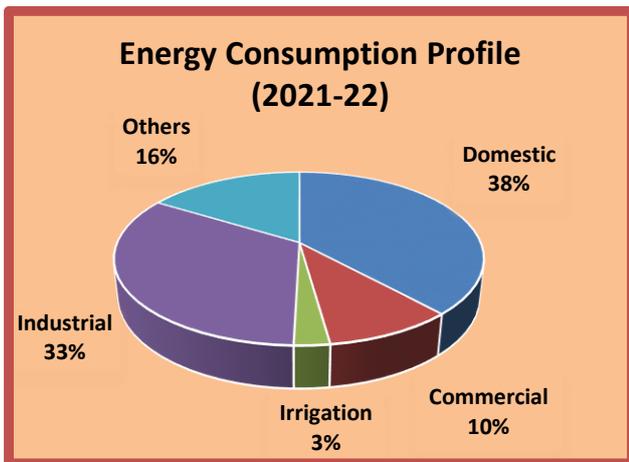


Table 4.6  
**NORTH EASTERN REGION**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
<b>Energy Consumption -MUs</b>											
1. Domestic	6651	7458	8023	8621	9260	9941	10666	11443	12282	13192	14093
2. Commercial	1635	1837	1972	2116	2271	2438	2619	2816	3036	3285	3535
3. Public lighting	134	141	147	154	161	168	176	183	191	199	207
4. Public Water Works	303	317	332	347	362	377	393	409	425	441	457
5. Irrigation	94	99	104	109	116	131	140	149	160	170	180
6. LT Industries	220	234	248	263	278	294	309	325	341	356	370
7. HT Industries	2408	2510	2631	2785	2956	3130	3316	3504	3740	3821	3905
8. Railway Traction	0	0	117	117	117	156	156	156	156	156	156
9. Bulk Supply	1009	1048	1087	1127	1167	1207	1248	1289	1330	1372	1413
10. Others	1546	1614	1684	1757	1832	1911	1992	2076	2162	2252	2345
<b>Total Energy Consumption</b>	<b>13999</b>	<b>15256</b>	<b>16346</b>	<b>17397</b>	<b>18521</b>	<b>19754</b>	<b>21015</b>	<b>22351</b>	<b>23823</b>	<b>25244</b>	<b>26662</b>
T&D losses -MU	4010	4212	4381	4496	4610	4737	4840	4940	5046	5120	5169
T&D losses -in %	22.26	21.63	21.14	20.54	19.93	19.34	18.72	18.10	17.48	16.86	16.24
Energy Requirement - MU	18009	19468	20727	21893	23131	24491	25855	27290	28870	30364	31831
Annual Load Factor - %	60.82	60.18	59.72	59.31	58.94	58.56	58.18	57.81	57.44	57.08	56.69
Peak Demand - MW	3380	3693	3962	4214	4480	4774	5073	5389	5738	6073	6410
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>18312</b>	<b>19796</b>	<b>21076</b>	<b>22261</b>	<b>23521</b>	<b>24904</b>	<b>26292</b>	<b>27752</b>	<b>29359</b>	<b>30880</b>	<b>32373</b>
<b>Peak Demand ( Ex - Bus ) - MW</b>	<b>3437</b>	<b>3755</b>	<b>4029</b>	<b>4284</b>	<b>4556</b>	<b>4855</b>	<b>5159</b>	<b>5481</b>	<b>5835</b>	<b>6176</b>	<b>6519</b>
<b>T&amp;D losses (Ex- Bus) -in %</b>	<b>23.55</b>	<b>22.93</b>	<b>22.44</b>	<b>21.85</b>	<b>21.26</b>	<b>20.68</b>	<b>20.07</b>	<b>19.46</b>	<b>18.86</b>	<b>18.25</b>	<b>17.64</b>
<b>Pattern of Utilization</b>											
Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	47.51	48.89	49.08	49.56	50.00	50.33	50.75	51.20	51.55	52.26	52.86
Commercial	11.68	12.04	12.07	12.16	12.26	12.34	12.46	12.60	12.74	13.01	13.26
Irrigation	0.67	0.65	0.64	0.63	0.62	0.66	0.67	0.67	0.67	0.67	0.68
Industrial	18.77	17.98	17.61	17.52	17.46	17.33	17.25	17.13	17.13	16.55	16.04
Others	21.37	20.45	20.60	20.13	19.65	19.34	18.87	18.40	17.90	17.51	17.17
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

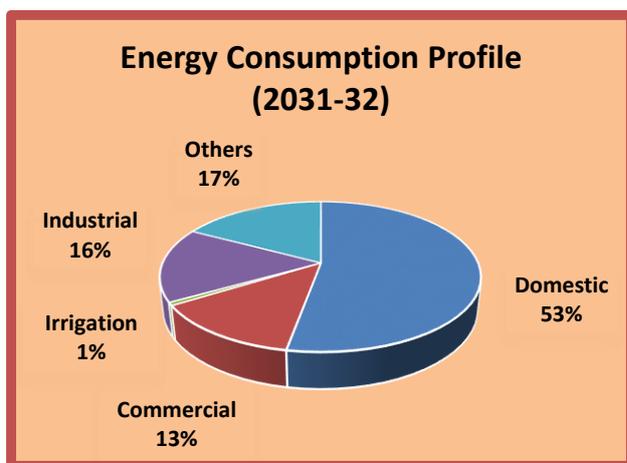
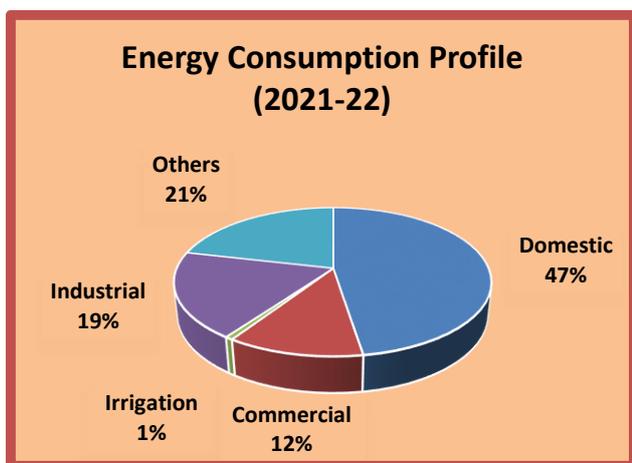


Table 4.7 – State/UT Wise **Domestic** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	718	747	776	806	834	863	893	925	961	1004	1041
Delhi	16673	18218	19126	20057	21013	21991	22996	24029	25099	26218	27308
Haryana	12195	14084	15361	16741	18231	19841	21585	23480	25547	27818	30234
Himachal Pradesh	2739	2879	3024	3173	3326	3483	3644	3810	3982	4202	4424
J&K	5352	5780	7512	8658	9911	10948	11764	12608	13461	14289	15066
Ladakh	77	89	103	118	136	156	179	206	236	270	309
Punjab	15707	16774	17633	18522	19449	20422	21455	22568	23793	25178	26596
Rajasthan	15354	16504	17541	18625	19762	20958	22225	23582	25063	26715	28322
Uttar Pradesh	47294	54660	58684	62951	67474	72273	77373	82810	88637	94938	101310
Uttarakhand	3565	3809	4067	4338	4623	4926	5248	5592	5965	6375	6793
<b>Northern Region</b>	<b>119674</b>	<b>133545</b>	<b>143827</b>	<b>153988</b>	<b>164760</b>	<b>175863</b>	<b>187362</b>	<b>199611</b>	<b>212744</b>	<b>227007</b>	<b>241403</b>
Chhattisgarh	6945	7640	8068	8513	8978	9465	9977	10519	11101	11734	12333
Dadar Nagar Haveli	172	239	261	285	311	340	371	405	443	483	527
Daman & Diu	164	191	210	231	253	277	304	333	365	401	437
Goa	1308	1386	1466	1551	1642	1738	1840	1952	2077	2218	2359
Gujarat	17913	20079	21146	22251	23395	24583	25824	27128	28519	30027	31517
Madhya Pradesh	17517	20021	21599	23274	25051	26931	28918	31014	33222	35545	37738
Maharashtra	32984	34861	36186	37535	38918	40349	41851	43469	45267	47354	49284
<b>Western Region</b>	<b>77003</b>	<b>84416</b>	<b>88936</b>	<b>93641</b>	<b>98548</b>	<b>103683</b>	<b>109085</b>	<b>114821</b>	<b>120992</b>	<b>127762</b>	<b>134196</b>
Andhra Pradesh	18301	19858	21529	23320	25238	27290	29486	31836	34352	37055	39779
Karnataka	14207	14849	15502	16168	16847	17544	18267	19031	19860	20794	21621
Kerala	12919	13641	14385	15153	15947	16774	17642	18569	19579	20714	21813
Lakshadweep	37	38	39	41	42	43	44	46	47	48	49
Puducherry	806	839	872	906	940	978	1018	1061	1111	1171	1226
Tamil Nadu	31606	33819	36147	38600	41190	43942	46887	50076	53587	57538	61575
Telangana	13047	13456	14376	15342	16358	17424	18543	19723	20976	22320	23592
<b>Southern Region</b>	<b>90924</b>	<b>96500</b>	<b>102850</b>	<b>109529</b>	<b>116562</b>	<b>123996</b>	<b>131887</b>	<b>140342</b>	<b>149511</b>	<b>159639</b>	<b>169655</b>
A&N	148	152	155	158	161	164	166	169	172	175	178
Bihar	16965	19736	21545	23497	25598	27855	30272	32850	35583	38456	41318
DVC	0	0	0	0	0	0	0	0	0	0	0
Jharkhand	6731	7262	7824	8418	9044	9704	10398	11126	11891	12695	13489
Odisha	8539	9523	10164	10839	11551	12298	13080	13897	14741	15604	16336
Sikkim	117	124	131	138	146	154	163	172	181	190	200
West Bengal	18248	20074	21301	22586	23935	25350	26838	28407	30074	31857	33646
<b>Eastern Region</b>	<b>50747</b>	<b>56870</b>	<b>61119</b>	<b>65637</b>	<b>70435</b>	<b>75525</b>	<b>80917</b>	<b>86620</b>	<b>92641</b>	<b>98977</b>	<b>105166</b>
AP	207	223	242	262	283	305	328	354	382	412	440
Assam	3901	4517	4877	5263	5676	6118	6594	7109	7672	8295	8933
Manipur	490	530	572	617	666	717	771	828	890	955	1020
Meghalaya	554	578	602	627	653	680	709	739	773	808	831
Mizoram	466	515	569	627	690	758	831	908	989	1074	1165
Nagaland	392	413	436	458	481	506	530	556	581	604	617
Tripura	642	683	724	767	812	857	903	949	996	1045	1088
<b>North Eastern Region</b>	<b>6651</b>	<b>7458</b>	<b>8023</b>	<b>8621</b>	<b>9260</b>	<b>9941</b>	<b>10666</b>	<b>11443</b>	<b>12282</b>	<b>13192</b>	<b>14093</b>
<b>All India</b>	<b>344998</b>	<b>378789</b>	<b>404754</b>	<b>431417</b>	<b>459565</b>	<b>489009</b>	<b>519918</b>	<b>552836</b>	<b>588169</b>	<b>626578</b>	<b>664514</b>

Table 4.8 – State/UT Wise **Commercial** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	363	447	459	470	481	491	502	514	528	545	560
Delhi	6234	7723	7937	8098	8256	8410	8564	8719	8883	9062	9228
Haryana	4311	4980	5372	5792	6241	6722	7240	7800	8410	9082	9789
Himachal Pradesh	702	746	791	839	889	941	997	1055	1118	1198	1277
J&K	1029	1085	1316	1459	1608	1723	1806	1887	1961	2025	2065
Ladakh	31	34	37	41	45	50	55	60	66	72	79
Punjab	3798	4017	4246	4487	4743	5018	5318	5654	6037	6490	6959
Rajasthan	5096	5565	5952	6362	6797	7262	7762	8306	8912	9601	10282
Uttar Pradesh	6887	8107	8665	9263	9909	10613	11390	12264	13267	14453	15669
Uttarakhand	1794	1891	1990	2093	2200	2311	2426	2548	2678	2820	2961
<b>Northern Region</b>	<b>30246</b>	<b>34594</b>	<b>36767</b>	<b>38905</b>	<b>41169</b>	<b>43541</b>	<b>46059</b>	<b>48806</b>	<b>51859</b>	<b>55347</b>	<b>58868</b>
Chhattisgarh	1602	1978	2039	2101	2166	2237	2314	2402	2507	2640	2767
Dadar Nagar Haveli	38	40	42	45	47	50	53	57	61	66	71
Daman & Diu	49	51	52	54	56	58	60	63	66	69	72
Goa	531	556	581	608	637	666	699	734	774	821	867
Gujarat	4553	5238	5567	5915	6286	6683	7111	7579	8096	8681	9278
Madhya Pradesh	4452	5169	5533	5917	6323	6753	7209	7695	8218	8786	9306
Maharashtra	15199	15790	16291	16799	17319	17859	18431	19055	19763	20601	21396
<b>Western Region</b>	<b>26423</b>	<b>28821</b>	<b>30105</b>	<b>31439</b>	<b>32835</b>	<b>34306</b>	<b>35876</b>	<b>37584</b>	<b>39484</b>	<b>41663</b>	<b>43757</b>
Andhra Pradesh	4771	5109	5468	5852	6262	6702	7176	7690	8255	8885	9518
Karnataka	5223	5397	5574	5754	5939	6132	6338	6567	6832	7154	7449
Kerala	4343	4587	4839	5100	5371	5656	5959	6287	6652	7073	7481
Lakshadweep	11	12	12	13	14	14	15	15	16	16	17
Puducherry	152	207	212	218	224	232	241	251	265	285	303
Tamil Nadu	7823	8313	8826	9368	9945	10566	11246	12010	12890	13941	15014
Telangana	5879	6082	6492	6922	7373	7845	8341	8862	9413	10003	10562
<b>Southern Region</b>	<b>28203</b>	<b>29706</b>	<b>31424</b>	<b>33227</b>	<b>35128</b>	<b>37148</b>	<b>39315</b>	<b>41682</b>	<b>44324</b>	<b>47358</b>	<b>50344</b>
A&N	63	67	70	73	76	80	83	86	89	93	96
Bihar	2567	2996	3261	3547	3856	4191	4555	4951	5384	5860	6336
DVC	41	41	41	42	42	42	42	42	43	43	43
Jharkhand	984	1078	1181	1292	1413	1544	1688	1847	2022	2219	2420
Odisha	2611	2840	3032	3236	3452	3682	3927	4188	4466	4761	5018
Sikkim	39	41	44	46	48	51	53	56	58	61	64
West Bengal	6466	7241	7659	8100	8565	9058	9581	10141	10745	11405	12078
<b>Eastern Region</b>	<b>12771</b>	<b>14303</b>	<b>15287</b>	<b>16335</b>	<b>17453</b>	<b>18648</b>	<b>19929</b>	<b>21310</b>	<b>22806</b>	<b>24441</b>	<b>26054</b>
AP	62	67	74	81	88	96	105	114	124	136	146
Assam	1137	1302	1398	1500	1609	1727	1853	1992	2145	2319	2495
Manipur	91	99	107	116	125	135	147	159	173	189	205
Meghalaya	97	102	107	113	119	126	134	143	154	168	180
Mizoram	76	85	94	103	114	125	137	149	162	175	192
Nagaland	85	90	95	101	106	112	119	126	134	143	150
Tripura	86	92	97	103	110	117	125	133	143	155	167
<b>North Eastern Region</b>	<b>1635</b>	<b>1837</b>	<b>1972</b>	<b>2116</b>	<b>2271</b>	<b>2438</b>	<b>2619</b>	<b>2816</b>	<b>3036</b>	<b>3285</b>	<b>3535</b>
<b>All India</b>	<b>99277</b>	<b>109262</b>	<b>115555</b>	<b>122022</b>	<b>128855</b>	<b>136081</b>	<b>143798</b>	<b>152198</b>	<b>161510</b>	<b>172094</b>	<b>182559</b>

Table 4.9 – State/UT Wise **Public Lighting** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	16	16	16	16	16	16	16	16	16	16	16
Delhi	362	368	375	380	386	392	397	402	406	410	414
Haryana	191	209	229	250	274	299	326	355	386	419	455
Himachal Pradesh	11	11	11	12	12	12	12	12	12	12	12
J&K	132	141	151	161	171	183	195	207	221	235	250
Ladakh	0	0	0	0	0	0	0	0	0	0	0
Punjab	184	190	196	202	208	214	219	225	231	236	241
Rajasthan	367	381	395	409	424	439	454	469	485	500	516
Uttar Pradesh	800	830	860	890	921	951	982	1013	1044	1076	1107
Uttarakhand	54	57	60	63	66	70	73	77	80	84	88
<b>Northern Region</b>	<b>2116</b>	<b>2203</b>	<b>2292</b>	<b>2384</b>	<b>2478</b>	<b>2575</b>	<b>2674</b>	<b>2776</b>	<b>2881</b>	<b>2988</b>	<b>3099</b>
Chhattisgarh	97	100	102	104	106	108	110	112	114	116	118
Dadar Nagar Haveli	3	3	3	3	4	4	4	4	4	4	5
Daman & Diu	7	7	7	7	8	8	8	8	9	9	9
Goa	30	32	34	36	37	39	41	43	45	47	49
Gujarat	383	395	407	419	432	444	456	469	481	494	507
Madhya Pradesh	421	497	521	545	570	595	620	646	673	699	726
Maharashtra	2047	2105	2163	2219	2275	2330	2385	2438	2490	2540	2589
<b>Western Region</b>	<b>2989</b>	<b>3139</b>	<b>3236</b>	<b>3334</b>	<b>3431</b>	<b>3529</b>	<b>3625</b>	<b>3721</b>	<b>3816</b>	<b>3910</b>	<b>4003</b>
Andhra Pradesh	303	315	328	340	353	366	379	392	405	418	431
Karnataka	1097	1140	1184	1227	1272	1316	1360	1405	1449	1493	1537
Kerala	377	386	395	404	412	420	427	434	440	446	451
Lakshadweep	1	1	1	1	1	1	1	1	1	1	1
Puducherry	23	23	24	24	24	24	24	25	25	25	25
Tamil Nadu	1130	1179	1228	1278	1328	1378	1427	1477	1525	1573	1621
Telangana	346	361	377	392	408	424	440	456	473	490	506
<b>Southern Region</b>	<b>3277</b>	<b>3406</b>	<b>3536</b>	<b>3666</b>	<b>3797</b>	<b>3928</b>	<b>4059</b>	<b>4189</b>	<b>4318</b>	<b>4446</b>	<b>4572</b>
A&N	7	7	7	8	8	8	8	9	9	9	10
Bihar	111	120	129	138	148	159	170	182	195	208	222
DVC	0	0	0	0	0	0	0	0	0	0	0
Jharkhand	112	116	119	122	125	128	131	133	136	139	141
Odisha	144	152	161	171	180	190	201	212	223	234	246
Sikkim	0	0	0	0	0	0	0	0	0	0	0
West Bengal	825	884	947	1013	1084	1159	1238	1322	1410	1504	1603
<b>Eastern Region</b>	<b>1199</b>	<b>1279</b>	<b>1363</b>	<b>1452</b>	<b>1545</b>	<b>1644</b>	<b>1748</b>	<b>1858</b>	<b>1973</b>	<b>2095</b>	<b>2223</b>
AP	10	10	11	11	12	12	13	14	14	15	15
Assam	18	19	20	21	22	23	24	25	26	27	29
Manipur	5	5	5	6	6	6	6	6	6	6	6
Meghalaya	1	1	2	2	2	2	2	2	2	2	2
Mizoram	15	16	18	19	21	22	24	26	28	30	32
Nagaland	32	32	32	33	33	34	34	34	34	35	35
Tripura	54	57	60	63	66	70	73	77	80	84	88
<b>North Eastern Region</b>	<b>134</b>	<b>141</b>	<b>147</b>	<b>154</b>	<b>161</b>	<b>168</b>	<b>176</b>	<b>183</b>	<b>191</b>	<b>199</b>	<b>207</b>
<b>All India</b>	<b>9716</b>	<b>10167</b>	<b>10575</b>	<b>10990</b>	<b>11413</b>	<b>11844</b>	<b>12282</b>	<b>12727</b>	<b>13179</b>	<b>13638</b>	<b>14103</b>

Table 4.10 – State/UT Wise **Public Water Works** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	1	1	1	1	1	1	1	1	1	1	1
Delhi	664	676	687	698	708	717	726	734	742	749	756
Haryana	1278	1371	1470	1574	1685	1802	1926	2056	2194	2339	2493
Himachal Pradesh	613	624	633	642	651	659	667	674	680	686	691
J&K	629	648	668	688	708	729	750	772	794	816	839
Ladakh	3	3	3	4	4	4	5	5	6	6	7
Punjab	653	686	720	755	790	826	863	900	937	975	1013
Rajasthan	2799	2981	3174	3377	3592	3819	4059	4312	4579	4861	5158
Uttar Pradesh	1740	1852	1971	2097	2230	2371	2519	2676	2841	3016	3199
Uttarakhand	515	543	572	602	632	664	696	730	764	799	835
<b>Northern Region</b>	<b>8897</b>	<b>9386</b>	<b>9900</b>	<b>10438</b>	<b>11002</b>	<b>11593</b>	<b>12213</b>	<b>12861</b>	<b>13539</b>	<b>14250</b>	<b>14992</b>
Chhattisgarh	494	553	617	689	769	856	953	1061	1179	1309	1452
Dadar Nagar Haveli	6	6	6	6	7	7	7	8	8	9	9
Daman & Diu	3	3	3	3	3	3	4	4	4	4	4
Goa	0	0	0	0	0	0	0	0	0	0	0
Gujarat	2316	2450	2570	2694	2822	2955	3092	3233	3379	3530	3684
Madhya Pradesh	1867	2231	2424	2630	2850	3086	3336	3603	3887	4188	4508
Maharashtra	3164	3252	3338	3424	3509	3593	3674	3755	3833	3909	3983
<b>Western Region</b>	<b>7850</b>	<b>8494</b>	<b>8959</b>	<b>9447</b>	<b>9960</b>	<b>10500</b>	<b>11067</b>	<b>11663</b>	<b>12290</b>	<b>12948</b>	<b>13639</b>
Andhra Pradesh	962	1051	1149	1257	1373	1501	1640	1792	1957	2138	2334
Karnataka	4385	4668	4964	5274	5598	5936	6289	6657	7040	7439	7853
Kerala	392	405	417	428	439	450	461	471	481	490	498
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0
Puducherry	35	36	37	38	38	39	40	41	41	42	43
Tamil Nadu	1890	1997	2107	2219	2335	2452	2572	2694	2818	2943	3069
Telangana	1050	1103	1158	1215	1273	1332	1394	1456	1520	1586	1652
<b>Southern Region</b>	<b>8715</b>	<b>9260</b>	<b>9831</b>	<b>10430</b>	<b>11056</b>	<b>11711</b>	<b>12396</b>	<b>13111</b>	<b>13858</b>	<b>14637</b>	<b>15449</b>
A&N	0	0	0	0	0	0	0	0	0	0	0
Bihar	226	328	359	393	430	470	513	560	610	665	723
DVC	0	0	0	0	0	0	0	0	0	0	0
Jharkhand	0	0	0	0	0	0	0	0	0	0	0
Odisha	354	375	398	422	448	474	501	530	559	590	622
Sikkim	0	0	0	0	0	0	0	0	0	0	0
West Bengal	1079	1143	1209	1278	1350	1426	1504	1586	1671	1759	1851
<b>Eastern Region</b>	<b>1658</b>	<b>1846</b>	<b>1966</b>	<b>2094</b>	<b>2228</b>	<b>2369</b>	<b>2519</b>	<b>2676</b>	<b>2841</b>	<b>3014</b>	<b>3196</b>
AP	0	0	0	0	0	0	0	0	0	0	0
Assam	78	80	83	85	87	89	91	93	95	97	99
Manipur	22	23	25	26	27	28	30	31	33	34	36
Meghalaya	43	45	47	48	50	52	54	55	57	59	60
Mizoram	75	79	83	87	91	95	99	103	107	112	116
Nagaland	0	0	0	1	1	1	1	1	1	1	1
Tripura	84	89	95	101	106	112	119	125	132	138	145
<b>North Eastern Region</b>	<b>303</b>	<b>317</b>	<b>332</b>	<b>347</b>	<b>362</b>	<b>377</b>	<b>393</b>	<b>409</b>	<b>425</b>	<b>441</b>	<b>457</b>
<b>All India</b>	<b>27423</b>	<b>29304</b>	<b>30988</b>	<b>32755</b>	<b>34609</b>	<b>36551</b>	<b>38587</b>	<b>40720</b>	<b>42952</b>	<b>45289</b>	<b>47734</b>

Table 4.11 – State/UT Wise **Irrigation** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	0	0	0	0	0	0	0	0	0	0	0
Delhi	40	40	41	41	42	44	45	46	47	48	48
Haryana	10544	11633	12001	12370	12741	13217	13610	14001	14390	14777	15161
Himachal Pradesh	0	0	0	0	0	0	0	0	0	0	0
J&K	375	391	441	472	504	529	549	569	591	613	636
Ladakh	0	0	0	0	0	0	0	0	0	0	0
Punjab	12707	13324	13536	13733	13916	14162	14331	14482	14615	14730	14826
Rajasthan	29743	37113	43409	46009	48457	51108	53750	56474	59280	62165	65129
Uttar Pradesh	20299	23467	25154	26946	28848	30961	33119	35402	37816	40366	43057
Uttarakhand	407	421	435	448	462	477	491	505	518	531	545
<b>Northern Region</b>	<b>74115</b>	<b>86389</b>	<b>95016</b>	<b>100019</b>	<b>104970</b>	<b>110498</b>	<b>115894</b>	<b>121479</b>	<b>127257</b>	<b>133231</b>	<b>139402</b>
Chhattisgarh	6318	7138	7605	8095	8608	9145	9707	10293	10905	11542	12205
Dadar Nagar Haveli	5	5	5	6	6	6	6	6	6	6	6
Daman & Diu	5	5	6	6	7	8	8	9	10	11	12
Goa	33	35	37	39	42	44	46	49	51	54	56
Gujarat	21504	23969	24794	25616	26434	27268	28074	28869	29650	30414	31159
Madhya Pradesh	26193	29835	31244	32694	34184	36328	38017	39733	41474	43237	45017
Maharashtra	33879	36264	37518	38794	40086	42184	43668	45158	46650	48142	49630
<b>Western Region</b>	<b>87938</b>	<b>97253</b>	<b>101210</b>	<b>105250</b>	<b>109367</b>	<b>114983</b>	<b>119526</b>	<b>124117</b>	<b>128746</b>	<b>133406</b>	<b>138086</b>
Andhra Pradesh	13866	14425	15002	15598	16214	17007	17694	18400	19125	19869	20632
Karnataka	20700	21320	21952	22595	23249	24652	25538	26373	27208	28041	28868
Kerala	401	411	419	427	434	448	456	463	470	476	482
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0
Puducherry	61	62	64	65	66	67	68	69	69	70	71
Tamil Nadu	14371	15067	15774	16492	17220	18018	18773	19530	20287	21044	21798
Telangana	23632	24281	25441	26636	27866	29335	30673	32042	33440	34866	36317
<b>Southern Region</b>	<b>73032</b>	<b>75565</b>	<b>78651</b>	<b>81813</b>	<b>85050</b>	<b>89527</b>	<b>93203</b>	<b>96878</b>	<b>100601</b>	<b>104366</b>	<b>108168</b>
A&N	1	1	1	1	1	1	2	2	2	2	2
Bihar	1141	1546	1679	1822	1978	2146	2328	2525	2738	2969	3217
DVC	0	0	0	0	0	0	0	0	0	0	0
Jharkhand	225	242	261	283	308	369	407	449	494	542	595
Odisha	731	814	905	1006	1119	1244	1383	1537	1708	1898	2108
Sikkim	0	0	0	0	0	0	0	0	0	0	0
West Bengal	1395	1413	1429	1445	1459	1475	1487	1496	1506	1514	1520
<b>Eastern Region</b>	<b>3493</b>	<b>4016</b>	<b>4275</b>	<b>4558</b>	<b>4865</b>	<b>5235</b>	<b>5607</b>	<b>6009</b>	<b>6448</b>	<b>6924</b>	<b>7442</b>
AP	0	0	0	0	0	0	0	0	0	0	0
Assam	47	50	54	58	61	66	70	75	79	84	90
Manipur	7	7	7	7	8	8	8	8	8	8	8
Meghalaya	0	0	0	0	0	0	0	0	1	1	1
Mizoram	0	0	0	0	0	0	0	0	0	0	0
Nagaland	0	0	0	0	0	0	0	0	0	0	0
Tripura	39	41	43	44	46	57	62	66	72	77	82
<b>North Eastern Region</b>	<b>94</b>	<b>99</b>	<b>104</b>	<b>109</b>	<b>116</b>	<b>131</b>	<b>140</b>	<b>149</b>	<b>160</b>	<b>170</b>	<b>180</b>
<b>All India</b>	<b>238672</b>	<b>263320</b>	<b>279256</b>	<b>291750</b>	<b>304367</b>	<b>320374</b>	<b>334370</b>	<b>348631</b>	<b>363211</b>	<b>378096</b>	<b>393278</b>

Table 4.12 – State/UT Wise **LT Industries** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	119	120	122	123	123	125	126	127	128	128	129
Delhi	591	598	605	610	615	619	622	624	626	626	626
Haryana	1946	2589	2639	2687	2733	2776	2816	2853	2887	2917	2944
Himachal Pradesh	192	199	206	212	218	225	230	236	240	244	246
J&K	277	288	327	351	376	395	407	418	424	431	438
Ladakh	1	2	2	2	2	2	3	3	3	3	4
Punjab	3535	3664	3793	3921	4049	4175	4300	4423	4543	4660	4774
Rajasthan	3052	3110	3165	3216	3262	3302	3335	3359	3374	3376	3371
Uttar Pradesh	3226	3419	3556	3696	3836	3977	4117	4255	4389	4518	4639
Uttarakhand	320	327	334	341	347	352	358	362	366	369	371
<b>Northern Region</b>	<b>13260</b>	<b>14316</b>	<b>14748</b>	<b>15159</b>	<b>15562</b>	<b>15948</b>	<b>16314</b>	<b>16659</b>	<b>16979</b>	<b>17272</b>	<b>17542</b>
Chhattisgarh	618	642	666	690	713	736	758	778	796	810	820
Dadar Nagar Haveli	216	273	282	291	300	308	316	325	332	340	347
Daman & Diu	202	231	241	251	261	271	281	290	299	308	316
Goa	83	86	88	90	92	94	95	97	98	99	100
Gujarat	13337	15025	15673	16326	16983	17638	18295	18946	19587	20208	20804
Madhya Pradesh	1384	1581	1681	1785	1891	1999	2108	2216	2319	2412	2491
Maharashtra	6751	7480	7704	7922	8132	8332	8517	8684	8828	8944	9022
<b>Western Region</b>	<b>22592</b>	<b>25319</b>	<b>26335</b>	<b>27355</b>	<b>28372</b>	<b>29378</b>	<b>30371</b>	<b>31336</b>	<b>32260</b>	<b>33123</b>	<b>33901</b>
Andhra Pradesh	1504	1588	1673	1761	1850	1939	2029	2118	2203	2283	2356
Karnataka	1810	1853	1890	1921	1944	1957	1975	1994	2015	2038	2063
Kerala	942	976	1009	1041	1072	1101	1128	1152	1172	1189	1200
Lakshadweep	0	0	0	0	0	0	0	0	1	1	1
Puducherry	115	118	120	123	125	126	128	128	129	130	131
Tamil Nadu	8538	8995	9462	9937	10419	10906	11397	11888	12379	12864	13343
Telangana	1162	1203	1245	1287	1330	1372	1415	1457	1500	1543	1583
<b>Southern Region</b>	<b>14073</b>	<b>14733</b>	<b>15399</b>	<b>16070</b>	<b>16738</b>	<b>17402</b>	<b>18071</b>	<b>18737</b>	<b>19399</b>	<b>20048</b>	<b>20676</b>
A&N	11	12	13	13	14	14	15	15	15	15	15
Bihar	678	889	967	1050	1139	1233	1333	1439	1548	1659	1770
DVC	0	0	0	0	0	0	0	0	0	0	0
Jharkhand	243	259	275	291	308	326	344	361	378	395	411
Odisha	338	348	358	367	376	384	391	397	400	405	408
Sikkim	2	2	2	3	3	3	3	3	3	3	4
West Bengal	2307	2493	2584	2676	2768	2860	2952	3043	3131	3218	3300
<b>Eastern Region</b>	<b>3579</b>	<b>4002</b>	<b>4198</b>	<b>4399</b>	<b>4607</b>	<b>4820</b>	<b>5038</b>	<b>5257</b>	<b>5477</b>	<b>5696</b>	<b>5908</b>
AP	2	2	2	2	2	2	2	2	2	2	2
Assam	110	116	122	129	136	143	150	157	164	171	178
Manipur	20	21	22	24	25	26	28	29	31	32	34
Meghalaya	7	7	8	8	9	10	10	11	11	12	12
Mizoram	4	5	5	6	6	7	8	8	9	10	11
Nagaland	41	43	45	47	49	52	53	55	56	56	56
Tripura	37	40	43	47	51	55	59	63	68	72	77
<b>North Eastern Region</b>	<b>220</b>	<b>234</b>	<b>248</b>	<b>263</b>	<b>278</b>	<b>294</b>	<b>309</b>	<b>325</b>	<b>341</b>	<b>356</b>	<b>370</b>
<b>All India</b>	<b>53723</b>	<b>58604</b>	<b>60928</b>	<b>63245</b>	<b>65557</b>	<b>67842</b>	<b>70102</b>	<b>72315</b>	<b>74455</b>	<b>76495</b>	<b>78397</b>

Table 4.13 – State/UT Wise **HT Industries** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	116	115	114	112	110	108	105	102	98	94	89
Delhi	2664	2807	2900	3043	3203	3373	3556	3746	4018	4055	4086
Haryana	11523	12734	13857	15459	17274	19244	21398	23695	26783	27955	29171
Himachal Pradesh	5788	6005	6270	6615	6988	7377	7783	8194	8726	8935	9139
J&K	1065	1109	1242	1344	1451	1542	1615	1682	1753	1770	1790
Ladakh	1	1	1	1	1	1	1	2	2	2	2
Punjab	14282	15265	16548	18315	20299	22444	24777	27256	30527	31888	33292
Rajasthan	12251	12965	14068	15825	17842	20034	22432	24968	28568	29412	30218
Uttar Pradesh	12216	15972	16818	18262	19934	21753	23755	25876	29003	29558	30076
Uttarakhand	6307	6574	6893	7296	7733	8189	8669	9160	9788	10019	10232
<b>Northern Region</b>	<b>66213</b>	<b>73547</b>	<b>78712</b>	<b>86273</b>	<b>94836</b>	<b>104065</b>	<b>114091</b>	<b>124680</b>	<b>139266</b>	<b>143688</b>	<b>148097</b>
Chhattisgarh	9187	10368	11291	12540	13938	15445	17074	18791	21010	21934	22990
Dadar Nagar Haveli	5940	6695	7008	7381	7778	8192	8624	9067	9604	9876	10139
Daman & Diu	1993	2142	2232	2338	2447	2559	2690	2827	2992	3087	3183
Goa	1714	1756	1809	1881	1959	2039	2122	2205	2317	2346	2379
Gujarat	39147	44139	47866	53349	59576	66325	73690	81495	92169	95447	98694
Madhya Pradesh	10615	12051	13283	15261	17541	20023	22740	25604	29652	30900	32004
Maharashtra	34556	37033	39001	41931	45210	48693	52416	56255	61624	62606	63415
<b>Western Region</b>	<b>103153</b>	<b>114185</b>	<b>122488</b>	<b>134680</b>	<b>148449</b>	<b>163275</b>	<b>179356</b>	<b>196243</b>	<b>219367</b>	<b>226196</b>	<b>232806</b>
Andhra Pradesh	16973	18167	19771	22033	24587	27349	30352	33525	37735	39316	40851
Karnataka	6560	6655	6933	7532	8232	8978	9787	10609	11877	12096	12280
Kerala	2632	2755	2936	3214	3528	3865	4230	4610	5150	5240	5315
Lakshadweep	1	1	1	1	1	2	2	2	2	3	3
Puducherry	904	933	965	1007	1048	1092	1134	1176	1227	1233	1230
Tamil Nadu	8123	8390	8899	9830	10906	12062	13318	14618	16605	16770	16824
Telangana	12195	12598	13512	14801	16239	17774	19418	21125	23404	24021	24541
<b>Southern Region</b>	<b>47387</b>	<b>49499</b>	<b>53018</b>	<b>58418</b>	<b>64541</b>	<b>71122</b>	<b>78241</b>	<b>85666</b>	<b>96001</b>	<b>98679</b>	<b>101043</b>
A&N	0	0	0	0	0	0	0	0	0	0	0
Bihar	2532	2796	3077	3453	3877	4337	4836	5366	6042	6355	6658
DVC	15852	16814	17911	19211	20616	22106	23690	25354	27337	28639	29984
Jharkhand	4729	4863	5078	5433	5837	6272	6745	7238	7973	8104	8221
Odisha	6216	6668	7134	7947	8892	9920	11046	12227	13963	14286	14565
Sikkim	253	277	302	330	360	393	428	465	506	549	596
West Bengal	11159	12982	13925	15364	17033	18820	20783	22637	25141	25879	26625
<b>Eastern Region</b>	<b>40741</b>	<b>44400</b>	<b>47427</b>	<b>51739</b>	<b>56616</b>	<b>61847</b>	<b>67527</b>	<b>73288</b>	<b>80961</b>	<b>83812</b>	<b>86649</b>
AP	165	179	193	210	228	246	264	283	303	319	334
Assam	1561	1607	1670	1759	1860	1965	2078	2196	2360	2396	2428
Manipur	12	13	14	15	16	17	19	20	22	23	23
Meghalaya	643	681	721	764	808	854	899	943	985	1009	1042
Mizoram	16	18	19	21	25	27	30	32	35	37	38
Nagaland	0	0	0	0	0	0	0	0	0	0	0
Tripura	11	12	13	16	19	22	26	30	35	37	39
<b>North Eastern Region</b>	<b>2408</b>	<b>2510</b>	<b>2631</b>	<b>2785</b>	<b>2956</b>	<b>3130</b>	<b>3316</b>	<b>3504</b>	<b>3740</b>	<b>3821</b>	<b>3905</b>
<b>All India</b>	<b>259902</b>	<b>284141</b>	<b>304277</b>	<b>333896</b>	<b>367399</b>	<b>403439</b>	<b>442531</b>	<b>483380</b>	<b>539336</b>	<b>556196</b>	<b>572500</b>

Table 4.14 – State/UT Wise **Railway** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	0	0	0	0	0	0	0	0	0	0	0
Delhi	261	284	356	405	498	543	590	636	718	758	791
Haryana	386	435	587	692	889	984	1084	1181	1355	1441	1530
Himachal Pradesh	0	0	0	0	0	0	0	0	0	0	0
J&K	0	0	0	0	0	0	0	0	0	0	0
Ladakh	0	0	0	0	0	0	0	0	0	0	0
Punjab	188	194	200	206	211	217	222	227	232	237	242
Rajasthan	325	322	318	314	310	306	302	297	292	287	281
Uttar Pradesh	1541	1601	1664	1728	1793	1861	1930	2001	2074	2148	2225
Uttarakhand	30	32	33	35	37	39	41	43	45	47	49
<b>Northern Region</b>	<b>2731</b>	<b>2867</b>	<b>3158</b>	<b>3381</b>	<b>3739</b>	<b>3949</b>	<b>4169</b>	<b>4385</b>	<b>4715</b>	<b>4918</b>	<b>5118</b>
Chhattisgarh	987	1011	1035	1059	1082	1105	1127	1148	1168	1188	1206
Dadar Nagar Haveli	0	0	0	0	0	0	0	0	0	0	0
Daman & Diu	0	0	0	0	0	0	0	0	0	0	0
Goa	0	0	0	0	0	0	0	0	0	0	0
Gujarat	953	1039	1308	1493	1841	2007	2185	2356	2663	2814	3009
Madhya Pradesh	1855	1917	1979	2040	2101	3462	3542	3619	3694	3767	3837
Maharashtra	3744	4069	5165	5967	7277	8007	8677	9323	10481	11053	11491
<b>Western Region</b>	<b>7539</b>	<b>8036</b>	<b>9486</b>	<b>10559</b>	<b>12301</b>	<b>14581</b>	<b>15530</b>	<b>16445</b>	<b>18006</b>	<b>18822</b>	<b>19543</b>
Andhra Pradesh	1680	1768	1859	1953	2050	2151	2254	2360	2469	2581	2696
Karnataka	210	227	280	317	385	418	453	488	548	578	600
Kerala	151	160	169	179	189	199	209	220	231	242	253
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0
Puducherry	0	0	0	0	0	0	0	0	0	0	0
Tamil Nadu	588	627	668	711	755	801	848	897	947	999	1052
Telangana	700	771	793	816	838	861	883	906	928	949	971
<b>Southern Region</b>	<b>3329</b>	<b>3553</b>	<b>3770</b>	<b>3976</b>	<b>4217</b>	<b>4429</b>	<b>4648</b>	<b>4870</b>	<b>5123</b>	<b>5350</b>	<b>5572</b>
A&N	0	0	0	0	0	0	0	0	0	0	0
Bihar	2082	2272	2853	3258	4008	4375	4766	5145	5815	6156	6378
DVC	239	241	243	245	246	247	248	249	250	250	250
Jharkhand	1338	1440	1774	2003	2436	2641	2859	3070	3452	3638	3791
Odisha	1581	1706	1841	1986	2145	2316	2502	2704	2923	3161	3419
Sikkim	0	0	0	0	0	0	0	0	0	0	0
West Bengal	1270	1361	1520	1563	1607	1650	1694	1737	1780	1823	1866
<b>Eastern Region</b>	<b>6509</b>	<b>7021</b>	<b>8230</b>	<b>9055</b>	<b>10441</b>	<b>11229</b>	<b>12070</b>	<b>12905</b>	<b>14220</b>	<b>15028</b>	<b>15703</b>
AP	0	0	0	0	0	0	0	0	0	0	0
Assam	0	0	0	0	0	0	0	0	0	0	0
Manipur	0	0	0	0	0	0	0	0	0	0	0
Meghalaya	0	0	0	0	0	0	0	0	0	0	0
Mizoram	0	0	0	0	0	0	0	0	0	0	0
Nagaland	0	0	0	0	0	0	0	0	0	0	0
Tripura	0	0	117	117	117	156	156	156	156	156	156
<b>North Eastern Region</b>	<b>0</b>	<b>0</b>	<b>117</b>	<b>117</b>	<b>117</b>	<b>156</b>	<b>156</b>	<b>156</b>	<b>156</b>	<b>156</b>	<b>156</b>
<b>All India</b>	<b>20108</b>	<b>21477</b>	<b>24762</b>	<b>27088</b>	<b>30816</b>	<b>34344</b>	<b>36573</b>	<b>38762</b>	<b>42221</b>	<b>44274</b>	<b>46092</b>

Table 4.15 – State/UT Wise **Bulk Supply** Category Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	83	85	87	89	90	92	93	94	95	96	97
Delhi	582	926	1076	1254	1465	1713	2008	2355	2766	3251	3823
Haryana	1349	1677	1840	2019	2216	2431	2667	2925	3208	3518	3857
Himachal Pradesh	159	162	166	169	172	175	178	181	183	186	188
J&K	307	331	355	382	410	440	473	507	544	584	626
Ladakh	45	49	54	60	65	72	79	86	94	103	113
Punjab	1008	1059	1111	1163	1217	1272	1327	1384	1440	1498	1555
Rajasthan	621	635	648	662	674	687	699	710	721	732	742
Uttar Pradesh	5010	5449	5682	5920	6163	6411	6664	6921	7182	7448	7717
Uttarakhand	0	0	0	0	0	0	0	0	0	0	0
<b>Northern Region</b>	<b>9165</b>	<b>10373</b>	<b>11019</b>	<b>11717</b>	<b>12473</b>	<b>13293</b>	<b>14187</b>	<b>15164</b>	<b>16235</b>	<b>17415</b>	<b>18717</b>
Chhattisgarh	0	0	0	0	0	0	0	0	0	0	0
Dadar Nagar Haveli	0	0	0	0	0	0	0	0	0	0	0
Daman & Diu	0	0	0	0	0	0	0	0	0	0	0
Goa	34	36	37	39	41	43	46	48	50	52	55
Gujarat	37	38	39	40	41	41	42	43	44	45	45
Madhya Pradesh	448	459	471	482	493	504	514	524	534	543	552
Maharashtra	6809	7109	7414	7726	8043	8364	8690	9021	9354	9691	10030
<b>Western Region</b>	<b>7327</b>	<b>7642</b>	<b>7962</b>	<b>8287</b>	<b>8618</b>	<b>8953</b>	<b>9293</b>	<b>9636</b>	<b>9982</b>	<b>10331</b>	<b>10682</b>
Andhra Pradesh	707	730	753	777	801	825	849	873	898	923	948
Karnataka	5054	5199	5344	5487	5629	5768	5905	6040	6172	6300	6425
Kerala	496	513	530	546	562	578	593	607	622	635	648
Lakshadweep	0	0	0	0	0	0	0	0	0	0	0
Puducherry	416	422	428	433	438	442	446	449	453	455	458
Tamil Nadu	199	216	234	253	274	296	319	343	369	396	424
Telangana	2330	2476	2629	2789	2956	3130	3312	3501	3698	3902	4113
<b>Southern Region</b>	<b>9202</b>	<b>9557</b>	<b>9918</b>	<b>10285</b>	<b>10659</b>	<b>11038</b>	<b>11424</b>	<b>11814</b>	<b>12210</b>	<b>12611</b>	<b>13016</b>
A&N	37	38	38	39	40	41	42	43	44	44	45
Bihar	660	689	719	749	779	811	842	874	907	939	972
DVC	0	0	0	0	0	0	0	0	0	0	0
Jharkhand	0	0	0	0	0	0	0	0	0	0	0
Odisha	328	351	374	399	425	453	482	512	544	578	613
Sikkim	30	31	33	35	36	38	40	42	44	46	48
West Bengal	147	152	157	163	168	173	179	184	190	195	200
<b>Eastern Region</b>	<b>1201</b>	<b>1260</b>	<b>1321</b>	<b>1385</b>	<b>1450</b>	<b>1516</b>	<b>1585</b>	<b>1656</b>	<b>1728</b>	<b>1802</b>	<b>1878</b>
AP	25	27	28	30	31	33	35	36	38	40	41
Assam	590	611	632	653	673	694	715	736	757	777	797
Manipur	84	85	86	87	88	89	90	91	92	92	93
Meghalaya	97	100	102	105	107	109	111	113	115	116	118
Mizoram	9	9	10	11	12	13	14	15	16	17	18
Nagaland	104	110	116	122	128	135	141	148	155	162	169
Tripura	99	105	112	119	127	134	142	150	159	167	176
<b>North Eastern Region</b>	<b>1009</b>	<b>1048</b>	<b>1087</b>	<b>1127</b>	<b>1167</b>	<b>1207</b>	<b>1248</b>	<b>1289</b>	<b>1330</b>	<b>1372</b>	<b>1413</b>
<b>All India</b>	<b>27904</b>	<b>29879</b>	<b>31307</b>	<b>32800</b>	<b>34365</b>	<b>36008</b>	<b>37736</b>	<b>39559</b>	<b>41486</b>	<b>43531</b>	<b>45706</b>

Table 4.16 – State/UT Wise **Total Electrical Energy** Consumption (in MU)

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	1415	1532	1575	1616	1657	1697	1737	1780	1828	1885	1934
Delhi	28472	32263	33758	35277	36910	38563	40302	42129	44181	46095	48040
Haryana	45210	51248	54945	59223	63971	69052	74438	80183	87047	92203	97617
Himachal Pradesh	10373	10810	11300	11876	12488	13122	13781	14453	15256	15800	16340
J&K	10018	10669	12954	14505	16183	17585	18710	19860	21020	22096	23110
Ladakh	158	178	200	225	254	286	321	361	406	456	513
Punjab	52080	55190	58000	61323	64901	68770	72833	77138	82376	85912	89520
Rajasthan	71097	81114	90258	96437	102809	109652	116806	124318	133164	139590	146012
Uttar Pradesh	100511	118447	126365	135299	144909	155239	166202	177867	191210	202792	214598
Uttarakhand	13228	13903	14648	15495	16395	17339	18330	19361	20567	21424	22273
<b>Northern Region</b>	<b>332563</b>	<b>375354</b>	<b>404003</b>	<b>431277</b>	<b>460476</b>	<b>491306</b>	<b>523460</b>	<b>557450</b>	<b>597054</b>	<b>628255</b>	<b>659956</b>
Chhattisgarh	26281	29964	31985	34383	36982	39750	42705	45822	49531	52058	54712
Dadar Nagar Haveli	6380	7261	7608	8017	8453	8906	9382	9870	10459	10784	11105
Daman & Diu	2423	2631	2752	2891	3036	3184	3355	3534	3745	3889	4034
Goa	3733	3886	4053	4244	4449	4664	4889	5128	5412	5637	5867
Gujarat	106030	119759	127240	136487	146730	157432	168851	180823	195946	203702	211454
Madhya Pradesh	65659	75617	80690	86686	93168	101952	109387	117151	126284	132807	139026
Maharashtra	144417	153903	160888	168594	177214	186319	195081	204087	215376	222080	228230
<b>Western Region</b>	<b>354923</b>	<b>393021</b>	<b>415215</b>	<b>441303</b>	<b>470031</b>	<b>502208</b>	<b>533651</b>	<b>566416</b>	<b>606752</b>	<b>630958</b>	<b>654429</b>
Andhra Pradesh	60495	64523	69133	74583	80515	87016	93847	101081	109604	115785	121978
Karnataka	62575	64772	67224	70017	72975	76726	80085	83482	87467	90548	93460
Kerala	23061	24255	25534	26940	28418	29968	31596	33317	35314	37034	38683
Lakshadweep	51	52	54	56	58	60	62	65	67	69	71
Puducherry	2530	2658	2740	2832	2924	3022	3120	3224	3345	3438	3514
Tamil Nadu	92625	97905	103612	109939	116621	123683	131072	138850	147762	155466	163156
Telangana	62680	64806	68640	72966	77561	82578	87665	92946	98949	103459	107809
<b>Southern Region</b>	<b>304017</b>	<b>318971</b>	<b>336938</b>	<b>357333</b>	<b>379071</b>	<b>403054</b>	<b>427448</b>	<b>452965</b>	<b>482509</b>	<b>505798</b>	<b>528672</b>
A&N	267	276	284	292	300	308	315	322	330	338	345
Bihar	27026	31440	34658	37982	41892	45659	49703	53983	58917	63368	67699
DVC	16132	17096	18196	19498	20904	22395	23981	25646	27629	28932	30277
Jharkhand	14361	15259	16512	17842	19472	20984	22571	24224	26346	27732	29068
Odisha	31619	35745	36453	37668	39171	40907	42888	45065	47928	49504	50952
Sikkim	441	476	512	552	594	639	687	738	792	850	911
West Bengal	43061	48235	51299	54844	58723	62838	67251	71697	76960	80657	84410
<b>Eastern Region</b>	<b>132907</b>	<b>148527</b>	<b>157913</b>	<b>168678</b>	<b>181057</b>	<b>193731</b>	<b>207397</b>	<b>221674</b>	<b>238902</b>	<b>251380</b>	<b>263662</b>
AP	470	508	550	595	644	694	746	802	863	923	978
Assam	8777	9699	10316	10994	11721	12493	13320	14206	15204	16157	17127
Manipur	732	784	839	897	961	1027	1098	1172	1253	1339	1425
Meghalaya	1654	1732	1813	1897	1984	2074	2166	2259	2355	2437	2514
Mizoram	661	726	798	875	958	1046	1142	1241	1347	1455	1573
Nagaland	655	689	725	761	799	839	878	920	961	1001	1027
Tripura	1051	1118	1305	1377	1455	1581	1665	1750	1841	1933	2018
<b>North Eastern Region</b>	<b>13999</b>	<b>15256</b>	<b>16346</b>	<b>17397</b>	<b>18521</b>	<b>19754</b>	<b>21015</b>	<b>22351</b>	<b>23823</b>	<b>25244</b>	<b>26662</b>
<b>All India</b>	<b>1138408</b>	<b>1251129</b>	<b>1330415</b>	<b>1415987</b>	<b>1509157</b>	<b>1610053</b>	<b>1712971</b>	<b>1820855</b>	<b>1949040</b>	<b>2041635</b>	<b>2133380</b>

**Chapter-5**

**Category Wise Electricity Demand Projection for Discoms, States & UTs  
(2021-22 and 2031-32)**

This Chapter covers the projection of electricity demand in different consumption categories viz. domestic, commercial, public lighting, public water works, irrigation, LT industries, HT industries, railway traction and bulk supply as well as the electrical energy requirement, T&D losses, load factor and peak electricity demand for Distribution Companies, states and UT's. The year wise electricity demand projections for the period 2021-22 to 2031-32 are given in Tables 5.1- 5.90.

Table 5.1  
**CHANDIGARH**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	718	747	776	806	834	863	893	925	961	1004	1041
2. Commercial	363	447	459	470	481	491	502	514	528	545	560
3. Public lighting	16	16	16	16	16	16	16	16	16	16	16
4. Public Water Works	1	1	1	1	1	1	1	1	1	1	1
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	119	120	122	123	123	125	126	127	128	128	129
7. HT Industries	116	115	114	112	110	108	105	102	98	94	89
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	83	85	87	89	90	92	93	94	95	96	97
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>1415</b>	<b>1532</b>	<b>1575</b>	<b>1616</b>	<b>1657</b>	<b>1697</b>	<b>1737</b>	<b>1780</b>	<b>1828</b>	<b>1885</b>	<b>1934</b>
T&D losses -MU	135	144	145	146	147	147	147	147	147	148	147
T&D losses -in %	8.68	8.56	8.44	8.30	8.15	7.99	7.82	7.64	7.46	7.27	7.07
Energy Requirement - MU	1550	1676	1720	1763	1803	1844	1885	1927	1975	2033	2081
Annual Load Factor - %	41.29	43.99	43.70	43.39	43.08	42.80	42.57	42.41	42.33	42.26	42.18
<b>Peak Demand - MW</b>	<b>428</b>	<b>435</b>	<b>449</b>	<b>464</b>	<b>478</b>	<b>492</b>	<b>505</b>	<b>519</b>	<b>533</b>	<b>549</b>	<b>563</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>1606</b>	<b>1737</b>	<b>1783</b>	<b>1827</b>	<b>1869</b>	<b>1911</b>	<b>1953</b>	<b>1997</b>	<b>2047</b>	<b>2107</b>	<b>2157</b>
T&D losses (Ex- Bus) -in %	11.88	11.76	11.64	11.51	11.36	11.21	11.05	10.88	10.70	10.51	10.32

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	50.71	48.76	49.30	49.83	50.37	50.89	51.42	51.97	52.57	53.24	53.81
Commercial	25.64	29.20	29.13	29.07	29.01	28.95	28.90	28.87	28.87	28.90	28.98
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	16.58	15.36	14.95	14.54	14.11	13.72	13.31	12.86	12.36	11.79	11.26
Others	7.08	6.67	6.62	6.56	6.51	6.45	6.38	6.30	6.20	6.07	5.96
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

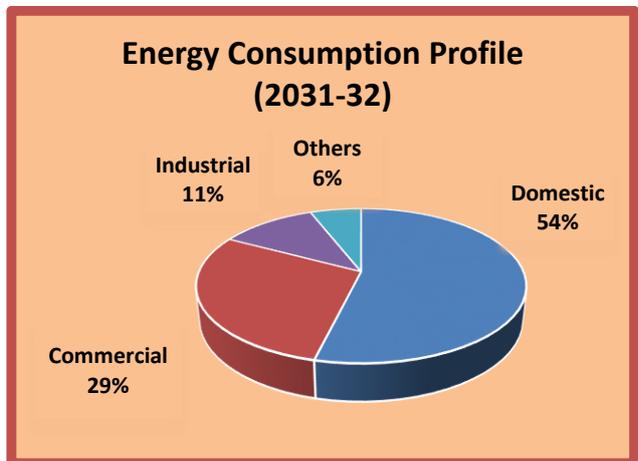
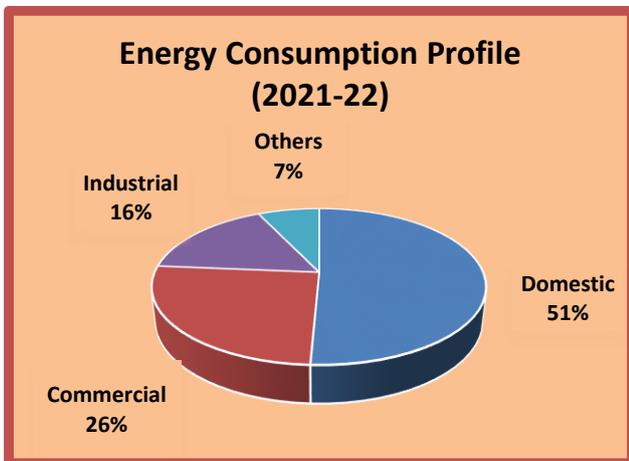


Table 5.2  
**Delhi - BRPL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	7635	8586	9084	9597	10127	10672	11231	11803	12388	12987	13576
2. Commercial	2475	3333	3410	3484	3556	3626	3695	3762	3829	3898	3960
3. Public lighting	152	155	158	162	165	168	171	174	177	179	182
4. Public Water Works	237	242	246	250	254	258	261	265	268	271	273
5. Irrigation	23	23	23	23	24	25	25	26	26	27	26
6. LT Industries	336	339	342	344	346	347	349	350	350	350	351
7. HT Industries	147	148	151	158	166	175	184	194	209	213	218
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	439	725	868	1038	1240	1480	1765	2103	2504	2979	3540
10. Others	318	435	458	482	507	532	558	585	612	641	669
<b>Total Energy Consumption</b>	<b>11760</b>	<b>13986</b>	<b>14740</b>	<b>15538</b>	<b>16384</b>	<b>17282</b>	<b>18239</b>	<b>19260</b>	<b>20363</b>	<b>21543</b>	<b>22796</b>
T&D losses -MU	913	1076	1123	1172	1221	1272	1324	1377	1433	1490	1549
T&D losses -in %	7.20	7.14	7.08	7.01	6.94	6.85	6.77	6.67	6.57	6.47	6.36
<b>Energy Requirement - MU</b>	<b>12673</b>	<b>15062</b>	<b>15863</b>	<b>16710</b>	<b>17606</b>	<b>18554</b>	<b>19562</b>	<b>20637</b>	<b>21795</b>	<b>23033</b>	<b>24345</b>
Annual Load Factor - %	45.27	49.13	48.91	48.65	48.34	47.97	47.54	47.07	46.56	45.99	45.33
<b>Peak Demand - MW</b>	<b>3196</b>	<b>3500</b>	<b>3702</b>	<b>3921</b>	<b>4158</b>	<b>4416</b>	<b>4697</b>	<b>5005</b>	<b>5344</b>	<b>5717</b>	<b>6131</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	64.92	61.39	61.63	61.77	61.81	61.75	61.58	61.28	60.84	60.28	59.55
Commercial	21.04	23.83	23.13	22.42	21.70	20.98	20.26	19.53	18.80	18.09	17.37
Irrigation	0.19	0.16	0.16	0.15	0.14	0.14	0.14	0.13	0.13	0.12	0.12
Industrial	4.10	3.48	3.34	3.23	3.12	3.02	2.92	2.82	2.75	2.61	2.50
Others	9.74	11.13	11.74	12.43	13.22	14.10	15.11	16.23	17.49	18.89	20.46
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

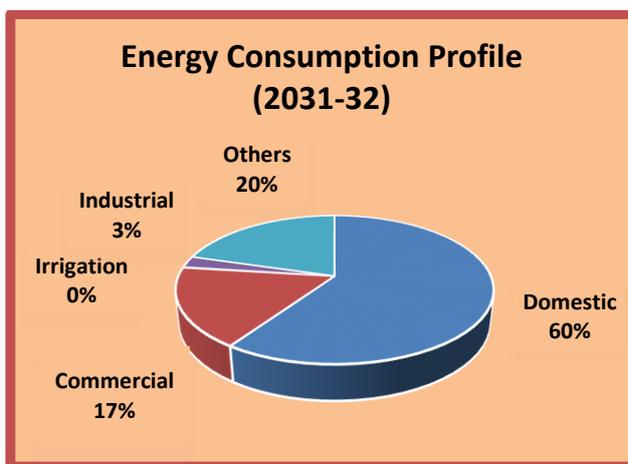
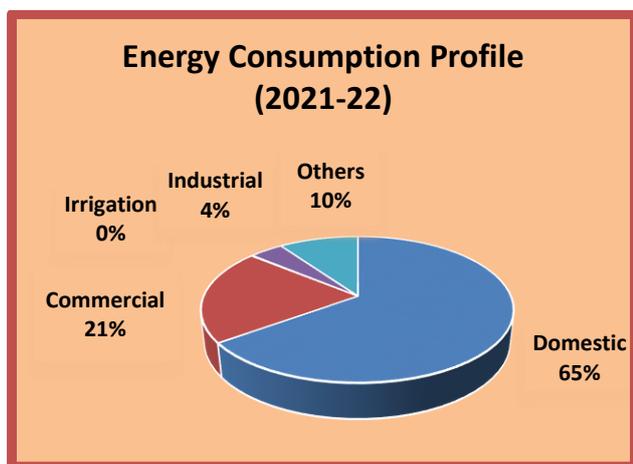
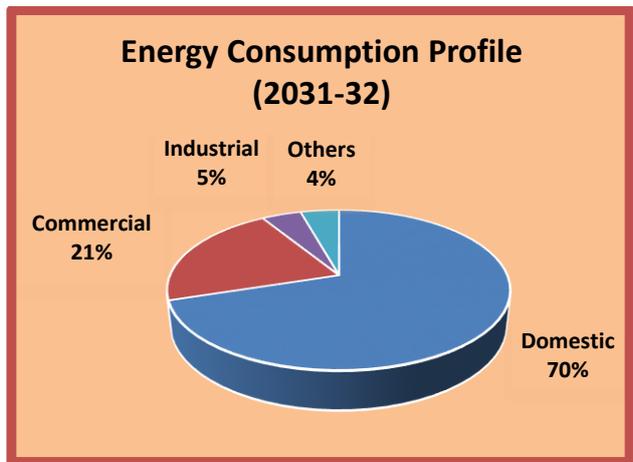
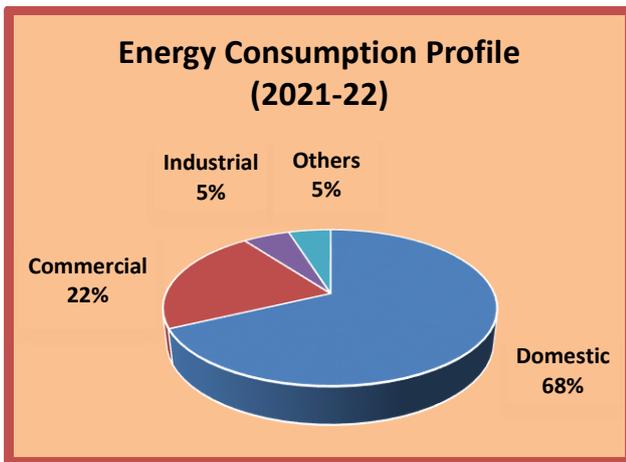


Table 5.3  
**Delhi - BYPL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	4065	4440	4625	4812	5001	5189	5378	5566	5753	5940	6116
2. Commercial	1306	1723	1744	1763	1781	1796	1810	1823	1834	1846	1853
3. Public lighting	65	67	69	71	73	75	76	78	80	82	83
4. Public Water Works	154	155	156	157	158	159	160	160	161	161	161
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	256	260	263	266	269	272	273	275	276	276	276
7. HT Industries	66	68	71	76	81	87	93	99	108	110	111
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	71	122	123	125	127	128	129	130	132	133	133
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>5983</b>	<b>6835</b>	<b>7053</b>	<b>7272</b>	<b>7490</b>	<b>7706</b>	<b>7920</b>	<b>8132</b>	<b>8343</b>	<b>8546</b>	<b>8733</b>
T&D losses -MU	523	594	608	621	634	645	655	664	671	677	681
T&D losses -in %	8.04	7.99	7.93	7.87	7.80	7.72	7.64	7.55	7.45	7.34	7.23
<b>Energy Requirement - MU</b>	<b>6506</b>	<b>7428</b>	<b>7661</b>	<b>7893</b>	<b>8123</b>	<b>8351</b>	<b>8575</b>	<b>8795</b>	<b>9015</b>	<b>9223</b>	<b>9414</b>
Annual Load Factor - %	44.39	47.84	47.25	46.67	46.08	45.48	44.89	44.28	43.70	43.08	42.40
<b>Peak Demand - MW</b>	<b>1673</b>	<b>1772</b>	<b>1851</b>	<b>1931</b>	<b>2012</b>	<b>2096</b>	<b>2181</b>	<b>2267</b>	<b>2355</b>	<b>2444</b>	<b>2535</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	67.94	64.96	65.58	66.18	66.77	67.34	67.90	68.45	68.96	69.51	70.03
Commercial	21.83	25.21	24.73	24.25	23.78	23.31	22.86	22.42	21.98	21.60	21.22
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	5.38	4.80	4.74	4.71	4.68	4.65	4.62	4.60	4.60	4.51	4.43
Others	4.84	5.03	4.94	4.86	4.78	4.69	4.61	4.54	4.46	4.39	4.32
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table 5.4**  
**Delhi - MES**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	153	156	158	161	164	166	169	172	176	181	185
2. Commercial	72	74	75	77	79	81	83	85	88	90	93
3. Public lighting	1	2	2	2	2	2	2	2	2	2	2
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	0	0	0	0	0	0	0	0	0	0	0
7. HT Industries	0	0	0	0	0	0	0	0	0	0	0
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>226</b>	<b>231</b>	<b>235</b>	<b>240</b>	<b>245</b>	<b>249</b>	<b>254</b>	<b>260</b>	<b>266</b>	<b>273</b>	<b>279</b>
T&D losses -MU	10	10	10	10	10	11	11	11	11	11	11
T&D losses -in %	4.11	4.11	4.11	4.10	4.09	4.07	4.05	4.03	4.00	3.97	3.94
<b>Energy Requirement - MU</b>	<b>236</b>	<b>241</b>	<b>246</b>	<b>250</b>	<b>255</b>	<b>260</b>	<b>265</b>	<b>270</b>	<b>277</b>	<b>284</b>	<b>291</b>
Annual Load Factor - %	55.66	54.73	53.81	52.93	52.09	51.30	50.59	50.01	49.60	49.43	49.16
<b>Peak Demand - MW</b>	<b>48</b>	<b>50</b>	<b>52</b>	<b>54</b>	<b>56</b>	<b>58</b>	<b>60</b>	<b>62</b>	<b>64</b>	<b>66</b>	<b>68</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	67.67	67.48	67.30	67.11	66.93	66.76	66.59	66.44	66.31	66.20	66.11
Commercial	31.68	31.86	32.04	32.22	32.40	32.57	32.73	32.88	33.01	33.12	33.22
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Others	0.65	0.65	0.66	0.67	0.67	0.68	0.68	0.68	0.68	0.68	0.68
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

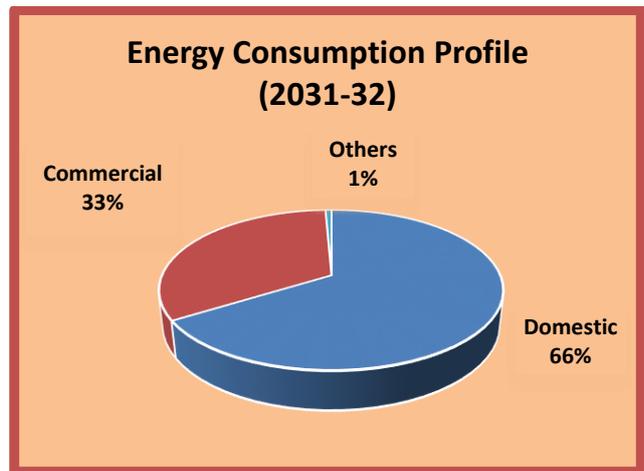
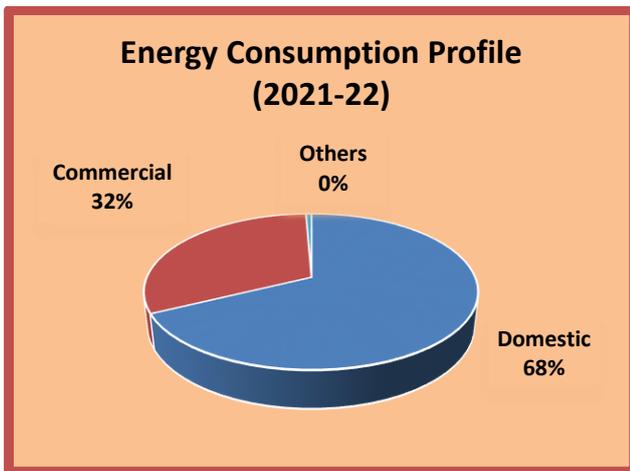


Table 5.5  
**Delhi - NDMC**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	260	267	274	281	288	297	306	318	332	352	370
2. Commercial	721	887	956	976	995	1013	1031	1048	1064	1081	1096
3. Public lighting	7	7	7	7	8	8	8	8	8	8	8
4. Public Water Works	1	1	1	1	1	1	1	1	1	1	1
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	0	0	0	0	0	0	0	0	0	0	0
7. HT Industries	0	0	0	0	0	0	0	0	0	0	0
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>989</b>	<b>1162</b>	<b>1238</b>	<b>1265</b>	<b>1291</b>	<b>1318</b>	<b>1345</b>	<b>1374</b>	<b>1405</b>	<b>1441</b>	<b>1475</b>
T&D losses -MU	107	124	130	130	130	129	129	129	128	128	128
T&D losses -in %	9.79	9.63	9.47	9.30	9.12	8.94	8.75	8.56	8.36	8.16	7.96
<b>Energy Requirement - MU</b>	<b>1096</b>	<b>1286</b>	<b>1368</b>	<b>1395</b>	<b>1421</b>	<b>1447</b>	<b>1474</b>	<b>1503</b>	<b>1534</b>	<b>1570</b>	<b>1602</b>
Annual Load Factor - %	40.74	42.14	41.50	40.87	40.26	39.69	39.16	38.71	38.35	38.14	37.87
<b>Peak Demand - MW</b>	<b>307</b>	<b>348</b>	<b>376</b>	<b>390</b>	<b>403</b>	<b>416</b>	<b>430</b>	<b>443</b>	<b>457</b>	<b>470</b>	<b>483</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.33	22.98	22.11	22.20	22.33	22.51	22.76	23.13	23.66	24.40	25.12
Commercial	72.88	76.33	77.23	77.15	77.03	76.86	76.61	76.25	75.74	75.01	74.30
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Others	0.80	0.69	0.65	0.65	0.64	0.63	0.62	0.62	0.61	0.59	0.58
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

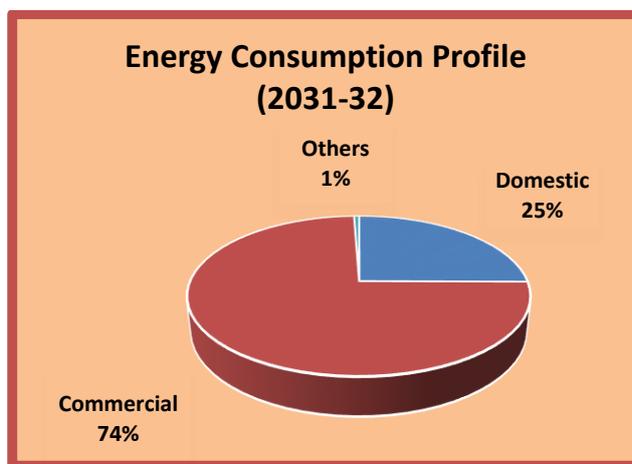
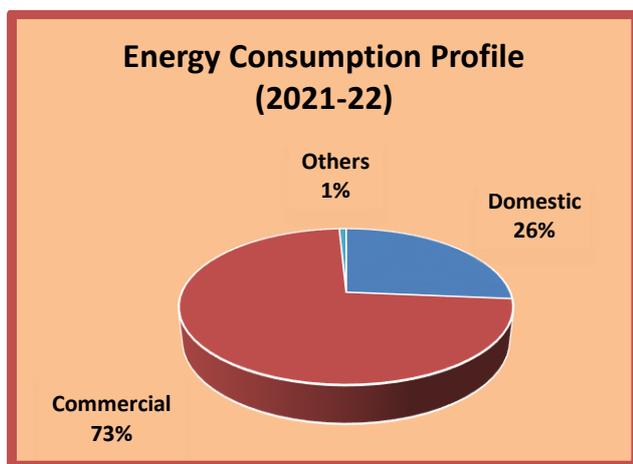


Table 5.6  
**Delhi - TPDDL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	4559	4770	4985	5206	5433	5667	5911	6170	6449	6758	7061
2. Commercial	1661	1707	1752	1798	1845	1893	1945	2002	2068	2147	2225
3. Public lighting	136	137	138	139	139	140	140	140	140	140	140
4. Public Water Works	273	279	284	289	295	300	304	309	313	317	321
5. Irrigation	17	17	17	17	18	19	19	20	21	21	21
6. LT Industries	0	0	0	0	0	0	0	0	0	0	0
7. HT Industries	2451	2590	2677	2809	2956	3112	3279	3453	3701	3733	3757
8. Railway Traction	9	9	10	10	10	10	10	10	11	11	11
9. Bulk Supply	73	79	85	91	98	106	113	122	130	140	149
10. Others	82	187	197	207	218	229	241	253	265	278	290
<b>Total Energy Consumption</b>	<b>9262</b>	<b>9774</b>	<b>10145</b>	<b>10567</b>	<b>11011</b>	<b>11475</b>	<b>11964</b>	<b>12478</b>	<b>13097</b>	<b>13544</b>	<b>13977</b>
T&D losses -MU	676	712	737	766	796	828	862	897	939	969	998
T&D losses -in %	6.80	6.79	6.77	6.76	6.75	6.73	6.72	6.71	6.69	6.68	6.67
<b>Energy Requirement - MU</b>	<b>9937</b>	<b>10486</b>	<b>10882</b>	<b>11333</b>	<b>11808</b>	<b>12304</b>	<b>12825</b>	<b>13375</b>	<b>14037</b>	<b>14514</b>	<b>14975</b>
Annual Load Factor - %	50.39	53.10	52.95	52.85	52.78	52.73	52.68	52.64	52.59	52.59	52.60
<b>Peak Demand - MW</b>	<b>2251</b>	<b>2254</b>	<b>2346</b>	<b>2448</b>	<b>2554</b>	<b>2663</b>	<b>2779</b>	<b>2901</b>	<b>3047</b>	<b>3151</b>	<b>3250</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	49.23	48.80	49.14	49.27	49.34	49.38	49.41	49.44	49.24	49.90	50.52
Commercial	17.93	17.46	17.27	17.01	16.75	16.50	16.26	16.04	15.79	15.85	15.92
Irrigation	0.18	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.15
Industrial	26.46	26.50	26.39	26.58	26.84	27.12	27.41	27.67	28.26	27.56	26.88
Others	6.19	7.07	7.03	6.97	6.90	6.84	6.76	6.68	6.56	6.53	6.52
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

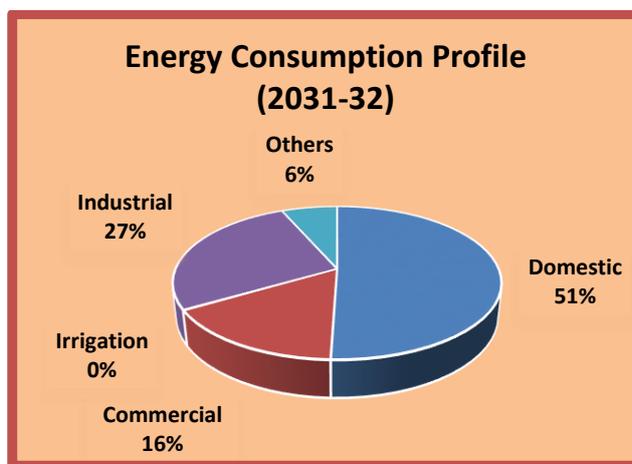
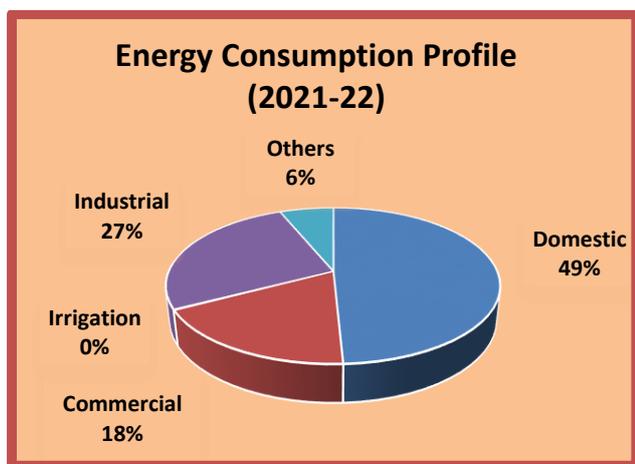


Table 5.7  
**DELHI**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	16673	18218	19126	20057	21013	21991	22996	24029	25099	26218	27308
2. Commercial	6234	7723	7937	8098	8256	8410	8564	8719	8883	9062	9228
3. Public lighting	362	368	375	380	386	392	397	402	406	410	414
4. Public Water Works	664	676	687	698	708	717	726	734	742	749	756
5. Irrigation	40	40	41	41	42	44	45	46	47	48	48
6. LT Industries	591	598	605	610	615	619	622	624	626	626	626
7. HT Industries	2664	2807	2900	3043	3203	3373	3556	3746	4018	4055	4086
8. Railway Traction	261	284	356	405	498	543	590	636	718	758	791
9. Bulk Supply	582	926	1076	1254	1465	1713	2008	2355	2766	3251	3823
10. Others	400	622	655	689	725	761	799	838	877	918	960
<b>Total Energy Consumption</b>	<b>28472</b>	<b>32263</b>	<b>33758</b>	<b>35277</b>	<b>36910</b>	<b>38563</b>	<b>40302</b>	<b>42129</b>	<b>44181</b>	<b>46095</b>	<b>48040</b>
T&D losses -MU	2228	2515	2608	2699	2791	2885	2980	3077	3183	3276	3367
T&D losses -in %	7.26	7.23	7.17	7.11	7.03	6.96	6.89	6.81	6.72	6.64	6.55
Energy Requirement - MU	30700	34778	36365	37976	39701	41448	43282	45206	47364	49371	51407
Annual Load Factor - %	47.82	51.09	50.85	50.58	50.34	50.02	49.67	49.29	48.95	48.52	48.02
<b>Peak Demand - MW</b>	<b>7329</b>	<b>7770</b>	<b>8164</b>	<b>8571</b>	<b>9003</b>	<b>9460</b>	<b>9948</b>	<b>10469</b>	<b>11046</b>	<b>11615</b>	<b>12222</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>31527</b>	<b>35715</b>	<b>37346</b>	<b>39000</b>	<b>40771</b>	<b>42566</b>	<b>44448</b>	<b>46425</b>	<b>48641</b>	<b>50702</b>	<b>52792</b>
T&D losses (Ex- Bus) -in %	9.69	9.67	9.61	9.55	9.47	9.40	9.33	9.25	9.17	9.09	9.00

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	58.56	56.47	56.66	56.86	56.93	57.03	57.06	57.04	56.81	56.88	56.84
Commercial	21.90	23.94	23.51	22.96	22.37	21.81	21.25	20.70	20.10	19.66	19.21
Irrigation	0.14	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.10	0.10
Industrial	11.43	10.56	10.38	10.36	10.34	10.35	10.37	10.37	10.51	10.16	9.81
Others	7.97	8.91	9.33	9.71	10.24	10.70	11.21	11.78	12.47	13.20	14.04
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

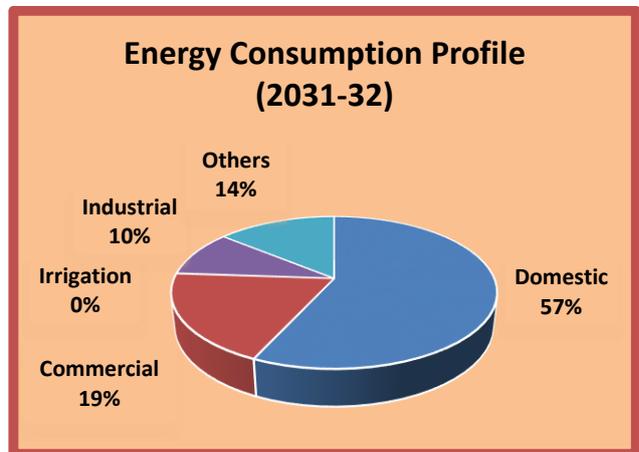
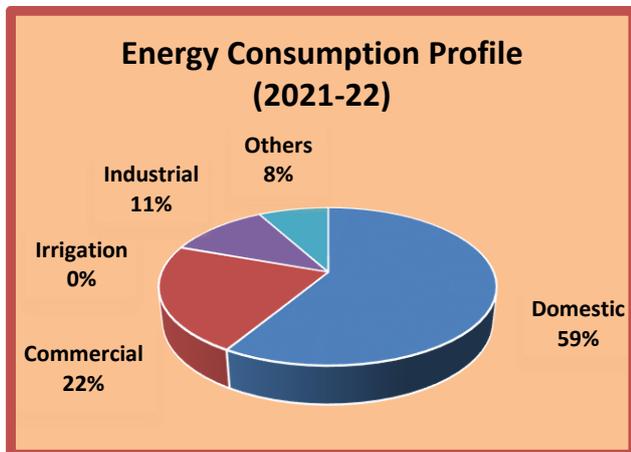


Table 5.8  
**Haryana - DHBVN**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	6780	8173	8916	9719	10587	11524	12536	13632	14820	16112	17494
2. Commercial	2852	3405	3674	3961	4268	4595	4945	5320	5722	6156	6615
3. Public lighting	91	99	107	116	126	136	147	159	171	184	199
4. Public Water Works	720	784	854	929	1010	1097	1190	1290	1398	1512	1635
5. Irrigation	6598	7050	7376	7709	8050	8406	8762	9125	9493	9867	10246
6. LT Industries	998	1026	1053	1080	1107	1133	1158	1183	1207	1230	1253
7. HT Industries	5847	6478	7076	7911	8848	9858	10952	12111	13631	14271	14945
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	1011	1328	1481	1649	1836	2041	2268	2517	2792	3093	3424
10. Others	1112	1142	1170	1199	1227	1254	1281	1306	1332	1356	1379
<b>Total Energy Consumption</b>	<b>26009</b>	<b>29484</b>	<b>31707</b>	<b>34274</b>	<b>37058</b>	<b>40044</b>	<b>43240</b>	<b>46644</b>	<b>50566</b>	<b>53782</b>	<b>57189</b>
T&D losses -MU	4890	5435	5725	6054	6397	6747	7104	7464	7872	8137	8401
T&D losses -in %	15.82	15.56	15.29	15.01	14.72	14.42	14.11	13.79	13.47	13.14	12.81
<b>Energy Requirement - MU</b>	<b>30899</b>	<b>34919</b>	<b>37431</b>	<b>40328</b>	<b>43455</b>	<b>46791</b>	<b>50344</b>	<b>54107</b>	<b>58438</b>	<b>61920</b>	<b>65589</b>
Annual Load Factor - %	56.44	59.73	60.01	60.28	60.55	60.82	61.09	61.37	61.64	61.91	62.18
<b>Peak Demand - MW</b>	<b>6250</b>	<b>6673</b>	<b>7121</b>	<b>7638</b>	<b>8193</b>	<b>8782</b>	<b>9407</b>	<b>10065</b>	<b>10823</b>	<b>11417</b>	<b>12041</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.07	27.72	28.12	28.36	28.57	28.78	28.99	29.23	29.31	29.96	30.59
Commercial	10.96	11.55	11.59	11.56	11.52	11.48	11.44	11.41	11.32	11.45	11.57
Irrigation	25.37	23.91	23.26	22.49	21.72	20.99	20.26	19.56	18.77	18.35	17.92
Industrial	26.32	25.45	25.64	26.23	26.86	27.45	28.01	28.50	29.34	28.82	28.32
Others	11.28	11.37	11.39	11.36	11.33	11.31	11.30	11.30	11.26	11.43	11.60
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

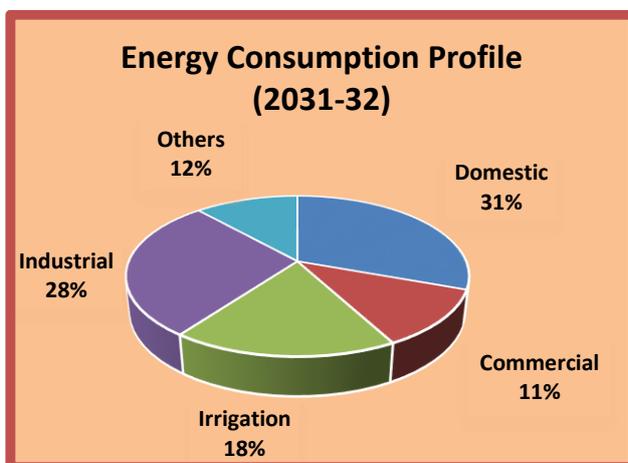
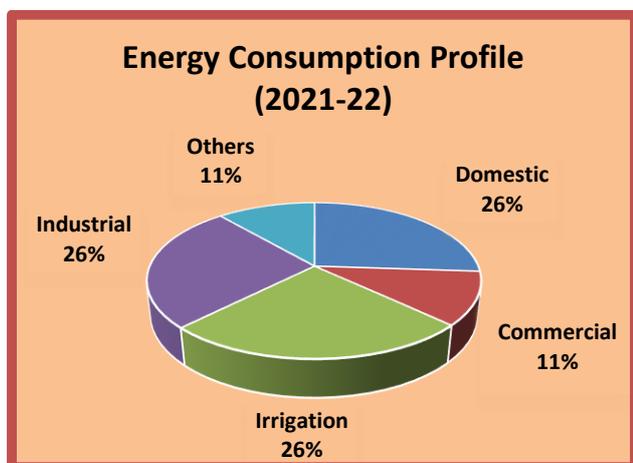


Table 5.9  
**Haryana - UHBVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	5416	5911	6445	7022	7644	8317	9048	9847	10727	11706	12740
2. Commercial	1459	1575	1699	1831	1973	2127	2294	2480	2687	2925	3174
3. Public lighting	100	110	122	134	148	163	179	196	215	235	256
4. Public Water Works	559	587	616	645	675	705	735	766	797	827	858
5. Irrigation	3946	4584	4626	4661	4691	4811	4848	4876	4897	4910	4915
6. LT Industries	948	1563	1586	1607	1626	1643	1658	1670	1679	1687	1691
7. HT Industries	5676	6256	6782	7548	8425	9386	10446	11585	13152	13685	14227
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	338	349	360	370	380	390	399	408	417	425	433
10. Others	374	395	416	438	461	484	507	531	555	580	604
<b>Total Energy Consumption</b>	<b>18815</b>	<b>21330</b>	<b>22651</b>	<b>24256</b>	<b>26023</b>	<b>28025</b>	<b>30114</b>	<b>32358</b>	<b>35126</b>	<b>36980</b>	<b>38898</b>
T&D losses -MU	4172	4595	4734	4910	5093	5294	5482	5667	5910	5967	6010
T&D losses -in %	18.15	17.73	17.29	16.83	16.37	15.89	15.40	14.90	14.40	13.89	13.38
<b>Energy Requirement - MU</b>	<b>22986</b>	<b>25925</b>	<b>27385</b>	<b>29166</b>	<b>31116</b>	<b>33319</b>	<b>35596</b>	<b>38025</b>	<b>41036</b>	<b>42947</b>	<b>44908</b>
Annual Load Factor - %	43.24	46.93	47.17	47.63	48.18	48.76	49.35	49.95	50.83	51.39	51.64
<b>Peak Demand - MW</b>	<b>6069</b>	<b>6307</b>	<b>6628</b>	<b>6990</b>	<b>7372</b>	<b>7800</b>	<b>8234</b>	<b>8689</b>	<b>9217</b>	<b>9541</b>	<b>9927</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	28.78	27.71	28.46	28.95	29.37	29.68	30.05	30.43	30.54	31.66	32.75
Commercial	7.76	7.38	7.50	7.55	7.58	7.59	7.62	7.66	7.65	7.91	8.16
Irrigation	20.97	21.49	20.42	19.22	18.03	17.17	16.10	15.07	13.94	13.28	12.64
Industrial	35.20	36.66	36.94	37.75	38.63	39.35	40.19	40.96	42.22	41.57	40.92
Others	7.28	6.75	6.68	6.54	6.39	6.21	6.04	5.87	5.65	5.59	5.53
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

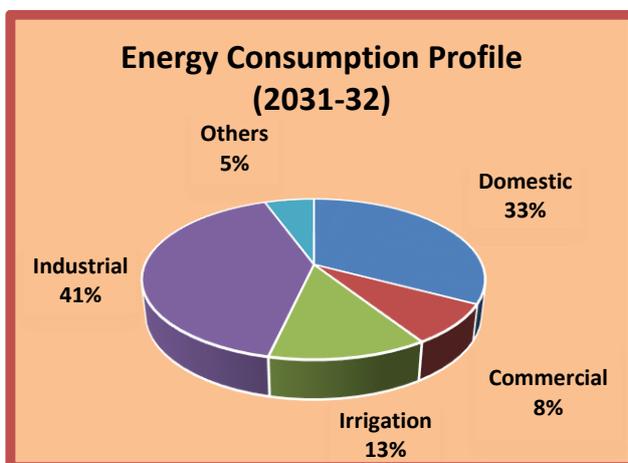
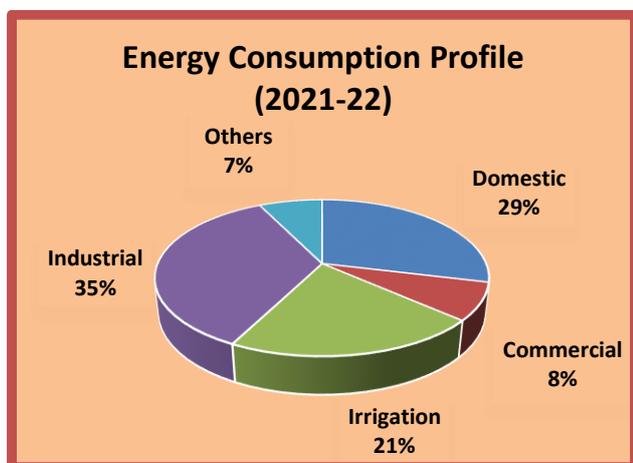


Table 5.10  
**Haryana**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	12195	14084	15361	16741	18231	19841	21585	23480	25547	27818	30234
2. Commercial	4311	4980	5372	5792	6241	6722	7240	7800	8410	9082	9789
3. Public lighting	191	209	229	250	274	299	326	355	386	419	455
4. Public Water Works	1278	1371	1470	1574	1685	1802	1926	2056	2194	2339	2493
5. Irrigation	10544	11633	12001	12370	12741	13217	13610	14001	14390	14777	15161
6. LT Industries	1946	2589	2639	2687	2733	2776	2816	2853	2887	2917	2944
7. HT Industries	11523	12734	13857	15459	17274	19244	21398	23695	26783	27955	29171
8. Railway Traction	386	435	587	692	889	984	1084	1181	1355	1441	1530
9. Bulk Supply	1349	1677	1840	2019	2216	2431	2667	2925	3208	3518	3857
10. Others	1486	1536	1587	1637	1687	1738	1788	1838	1887	1935	1983
<b>Total Energy Consumption</b>	<b>45210</b>	<b>51248</b>	<b>54945</b>	<b>59223</b>	<b>63971</b>	<b>69052</b>	<b>74438</b>	<b>80183</b>	<b>87047</b>	<b>92203</b>	<b>97617</b>
T&D losses -MU	9061	10031	10459	10964	11489	12041	12586	13131	13782	14104	14411
T&D losses -in %	16.70	16.37	15.99	15.62	15.23	14.85	14.46	14.07	13.67	13.27	12.86
Energy Requirement - MU	54271	61279	65404	70187	75460	81093	87024	93314	100829	106307	112028
Annual Load Factor - %	51.05	54.70	55.12	55.60	56.18	56.66	57.16	57.65	58.30	58.77	59.09
<b>Peak Demand - MW</b>	<b>12137</b>	<b>12788</b>	<b>13546</b>	<b>14411</b>	<b>15335</b>	<b>16337</b>	<b>17380</b>	<b>18478</b>	<b>19744</b>	<b>20648</b>	<b>21644</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>55535</b>	<b>62706</b>	<b>66926</b>	<b>71821</b>	<b>77217</b>	<b>82981</b>	<b>89050</b>	<b>95486</b>	<b>103176</b>	<b>108782</b>	<b>114636</b>
T&D losses (Ex- Bus) -in %	18.59	18.27	17.90	17.54	17.15	16.79	16.41	16.03	15.63	15.24	14.85

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.97	27.48	27.96	28.27	28.50	28.73	29.00	29.28	29.35	30.17	30.97
Commercial	9.54	9.72	9.78	9.78	9.76	9.73	9.73	9.73	9.66	9.85	10.03
Irrigation	23.32	22.70	21.84	20.89	19.92	19.14	18.28	17.46	16.53	16.03	15.53
Industrial	29.79	29.90	30.02	30.64	31.27	31.89	32.53	33.11	34.08	33.48	32.90
Others	10.37	10.20	10.40	10.42	10.55	10.50	10.47	10.42	10.37	10.47	10.57
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

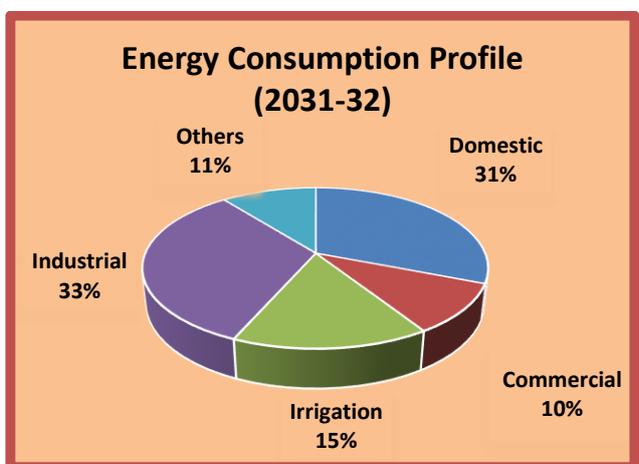
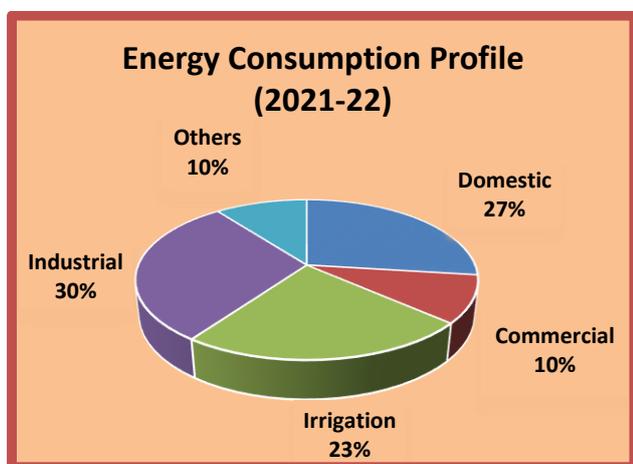


Table 5.11  
**HIMACHAL PRADESH**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	2739	2879	3024	3173	3326	3483	3644	3810	3982	4202	4424
2. Commercial	702	746	791	839	889	941	997	1055	1118	1198	1277
3. Public lighting	11	11	11	12	12	12	12	12	12	12	12
4. Public Water Works	613	624	633	642	651	659	667	674	680	686	691
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	192	199	206	212	218	225	230	236	240	244	246
7. HT Industries	5788	6005	6270	6615	6988	7377	7783	8194	8726	8935	9139
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	159	162	166	169	172	175	178	181	183	186	188
10. Others	169	183	198	215	232	251	270	292	314	338	363
<b>Total Energy Consumption</b>	<b>10373</b>	<b>10810</b>	<b>11300</b>	<b>11876</b>	<b>12488</b>	<b>13122</b>	<b>13781</b>	<b>14453</b>	<b>15256</b>	<b>15800</b>	<b>16340</b>
T&D losses -MU	1564	1619	1679	1749	1821	1892	1963	2031	2113	2154	2191
T&D losses -in %	13.10	13.02	12.94	12.84	12.73	12.60	12.47	12.32	12.16	12.00	11.82
Energy Requirement - MU	11937	12428	12979	13625	14309	15014	15744	16484	17369	17954	18531
Annual Load Factor - %	67.02	66.95	66.88	66.81	66.74	66.67	66.60	66.53	66.46	66.39	66.32
<b>Peak Demand - MW</b>	<b>2033</b>	<b>2119</b>	<b>2215</b>	<b>2328</b>	<b>2448</b>	<b>2571</b>	<b>2699</b>	<b>2829</b>	<b>2983</b>	<b>3087</b>	<b>3190</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>12115</b>	<b>12614</b>	<b>13172</b>	<b>13829</b>	<b>14522</b>	<b>15238</b>	<b>15979</b>	<b>16730</b>	<b>17628</b>	<b>18222</b>	<b>18807</b>
T&D losses (Ex- Bus) -in %	14.38	14.30	14.22	14.12	14.01	13.89	13.75	13.61	13.46	13.29	13.12

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.40	26.64	26.76	26.72	26.63	26.54	26.45	26.36	26.10	26.59	27.07
Commercial	6.77	6.90	7.00	7.06	7.12	7.17	7.23	7.30	7.33	7.58	7.82
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	57.65	57.39	57.31	57.48	57.71	57.93	58.14	58.32	58.77	58.09	57.43
Others	9.18	9.07	8.93	8.73	8.54	8.36	8.18	8.01	7.80	7.73	7.68
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

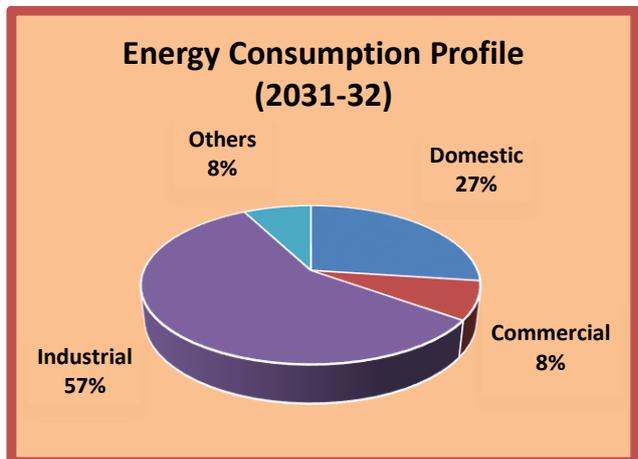
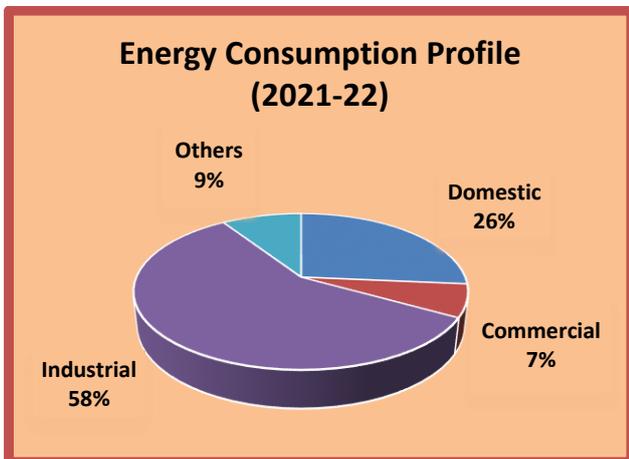


Table 5.12  
**Jammu & Kashmir - JPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1743	1890	2047	2215	2393	2580	2774	2970	3162	3339	3533
2. Commercial	498	527	558	590	622	654	686	716	742	759	770
3. Public lighting	122	130	139	149	159	170	181	193	205	219	233
4. Public Water Works	529	544	558	573	588	602	617	632	647	662	677
5. Irrigation	264	278	293	308	324	341	359	377	396	416	436
6. LT Industries	196	203	210	217	223	229	233	236	237	238	239
7. HT Industries	815	846	882	925	971	1016	1058	1096	1135	1139	1144
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	268	287	308	330	353	378	404	432	462	494	527
10. Others	600	635	673	712	754	797	843	890	940	993	1047
<b>Total Energy Consumption</b>	<b>5035</b>	<b>5341</b>	<b>5668</b>	<b>6018</b>	<b>6386</b>	<b>6767</b>	<b>7155</b>	<b>7543</b>	<b>7927</b>	<b>8258</b>	<b>8607</b>
T&D losses -MU	2924	2861	2808	2762	2720	2679	2637	2592	2542	2475	2413
T&D losses -in %	36.74	34.88	33.12	31.45	29.87	28.36	26.93	25.57	24.28	23.06	21.89
<b>Energy Requirement - MU</b>	<b>7958</b>	<b>8202</b>	<b>8476</b>	<b>8780</b>	<b>9106</b>	<b>9445</b>	<b>9793</b>	<b>10135</b>	<b>10469</b>	<b>10733</b>	<b>11020</b>
Annual Load Factor - %	64.73	66.68	66.67	66.69	66.68	66.58	66.35	65.93	65.31	64.14	63.03
<b>Peak Demand - MW</b>	<b>1403</b>	<b>1404</b>	<b>1451</b>	<b>1503</b>	<b>1559</b>	<b>1620</b>	<b>1685</b>	<b>1755</b>	<b>1830</b>	<b>1910</b>	<b>1996</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	34.62	35.38	36.12	36.80	37.47	38.12	38.76	39.38	39.89	40.43	41.05
Commercial	9.89	9.88	9.85	9.80	9.74	9.67	9.59	9.49	9.36	9.19	8.94
Irrigation	5.24	5.21	5.17	5.12	5.08	5.04	5.02	5.00	5.00	5.04	5.07
Industrial	20.08	19.65	19.26	18.98	18.70	18.39	18.06	17.66	17.31	16.68	16.07
Others	30.16	29.89	29.60	29.30	29.02	28.77	28.58	28.47	28.45	28.66	28.87
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

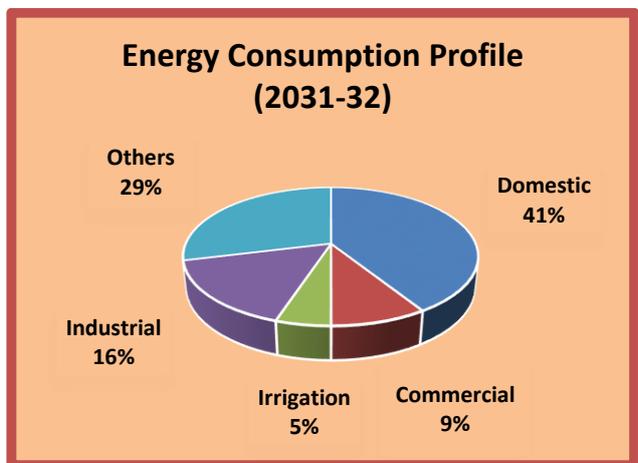
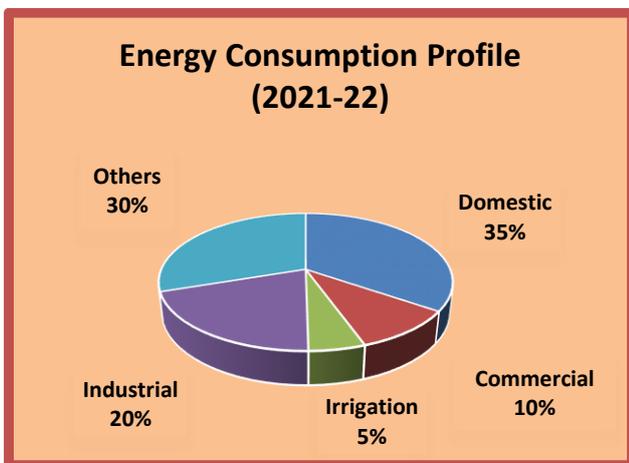


Table 5.13  
**Jammu & Kashmir - KPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	3609	3890	5464	6443	7519	8368	8991	9638	10299	10950	11533
2. Commercial	531	558	758	869	986	1069	1120	1170	1220	1266	1295
3. Public lighting	10	11	11	12	12	13	14	14	15	16	17
4. Public Water Works	99	104	109	115	121	127	133	140	147	154	162
5. Irrigation	112	113	148	164	179	188	190	192	195	197	199
6. LT Industries	81	85	116	134	153	166	174	181	188	193	198
7. HT Industries	250	263	361	418	480	526	556	586	617	631	646
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	40	44	48	52	57	63	69	75	82	90	99
10. Others	252	261	270	279	289	299	309	320	331	342	354
<b>Total Energy Consumption</b>	<b>4984</b>	<b>5328</b>	<b>7286</b>	<b>8486</b>	<b>9796</b>	<b>10818</b>	<b>11555</b>	<b>12317</b>	<b>13093</b>	<b>13838</b>	<b>14503</b>
T&D losses -MU	5929	5578	4562	3615	2386	1716	1797	1877	1957	2029	2108
T&D losses -in %	54.33	51.15	38.50	29.87	19.59	13.69	13.46	13.22	13.00	12.79	12.69
<b>Energy Requirement - MU</b>	<b>10913</b>	<b>10906</b>	<b>11848</b>	<b>12101</b>	<b>12183</b>	<b>12534</b>	<b>13352</b>	<b>14194</b>	<b>15051</b>	<b>15867</b>	<b>16611</b>
Annual Load Factor - %	73.47	70.25	70.08	69.87	69.63	69.33	68.93	68.38	68.18	68.01	67.96
<b>Peak Demand - MW</b>	<b>1696</b>	<b>1772</b>	<b>1930</b>	<b>1977</b>	<b>1997</b>	<b>2064</b>	<b>2211</b>	<b>2370</b>	<b>2520</b>	<b>2663</b>	<b>2790</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	72.41	73.01	75.00	75.92	76.75	77.36	77.81	78.25	78.66	79.13	79.52
Commercial	10.66	10.46	10.40	10.24	10.07	9.88	9.69	9.50	9.32	9.15	8.93
Irrigation	2.24	2.12	2.03	1.93	1.83	1.73	1.64	1.56	1.49	1.42	1.37
Industrial	6.64	6.54	6.55	6.51	6.46	6.40	6.32	6.23	6.15	5.95	5.82
Others	8.05	7.87	6.01	5.40	4.89	4.63	4.54	4.45	4.39	4.35	4.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

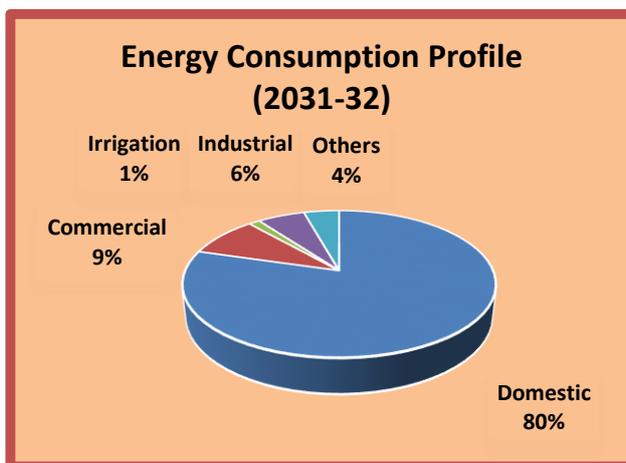
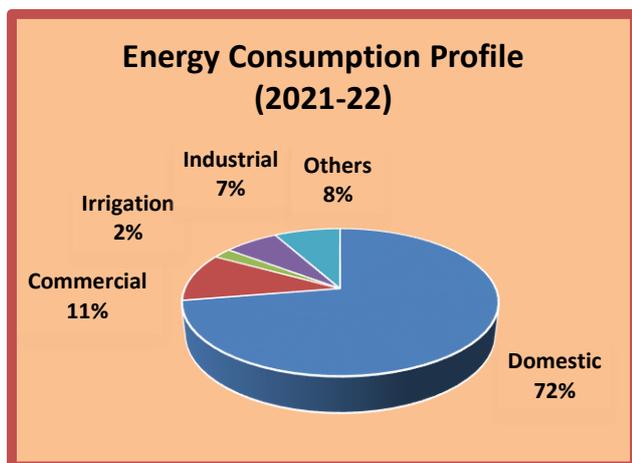


Table 5.14  
**Jammu & Kashmir**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	5352	5780	7512	8658	9911	10948	11764	12608	13461	14289	15066
2. Commercial	1029	1085	1316	1459	1608	1723	1806	1887	1961	2025	2065
3. Public lighting	132	141	151	161	171	183	195	207	221	235	250
4. Public Water Works	629	648	668	688	708	729	750	772	794	816	839
5. Irrigation	375	391	441	472	504	529	549	569	591	613	636
6. LT Industries	277	288	327	351	376	395	407	418	424	431	438
7. HT Industries	1065	1109	1242	1344	1451	1542	1615	1682	1753	1770	1790
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	307	331	355	382	410	440	473	507	544	584	626
10. Others	852	896	943	991	1042	1096	1151	1210	1271	1335	1401
<b>Total Energy Consumption</b>	<b>10018</b>	<b>10669</b>	<b>12954</b>	<b>14505</b>	<b>16183</b>	<b>17585</b>	<b>18710</b>	<b>19860</b>	<b>21020</b>	<b>22096</b>	<b>23110</b>
T&D losses -MU	8853	8439	7369	6376	5106	4394	4435	4468	4499	4504	4521
T&D losses -in %	46.91	44.17	36.26	30.54	23.99	19.99	19.16	18.37	17.63	16.93	16.36
Energy Requirement - MU	18871	19109	20323	20881	21289	21979	23145	24328	25519	26600	27631
Annual Load Factor - %	71.81	70.94	70.88	70.76	70.59	70.37	70.05	69.56	69.18	68.58	68.08
<b>Peak Demand - MW</b>	<b>3000</b>	<b>3075</b>	<b>3273</b>	<b>3369</b>	<b>3443</b>	<b>3566</b>	<b>3772</b>	<b>3993</b>	<b>4211</b>	<b>4427</b>	<b>4633</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>19324</b>	<b>19568</b>	<b>20811</b>	<b>21382</b>	<b>21800</b>	<b>22507</b>	<b>23700</b>	<b>24912</b>	<b>26132</b>	<b>27239</b>	<b>28294</b>
T&D losses (Ex- Bus) -in %	48.16	45.47	37.76	32.17	25.77	21.87	21.06	20.28	19.56	18.88	18.32

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	53.42	54.17	57.99	59.69	61.25	62.26	62.88	63.49	64.04	64.67	65.19
Commercial	10.27	10.17	10.16	10.06	9.94	9.80	9.65	9.50	9.33	9.16	8.94
Irrigation	3.75	3.66	3.40	3.25	3.11	3.01	2.93	2.87	2.81	2.77	2.75
Industrial	13.40	13.10	12.11	11.68	11.29	11.01	10.81	10.57	10.36	9.96	9.64
Others	19.16	18.89	16.34	15.32	14.41	13.92	13.73	13.58	13.46	13.44	13.48
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

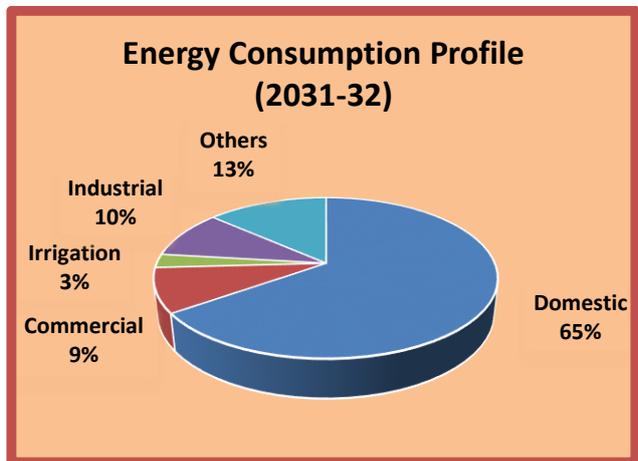
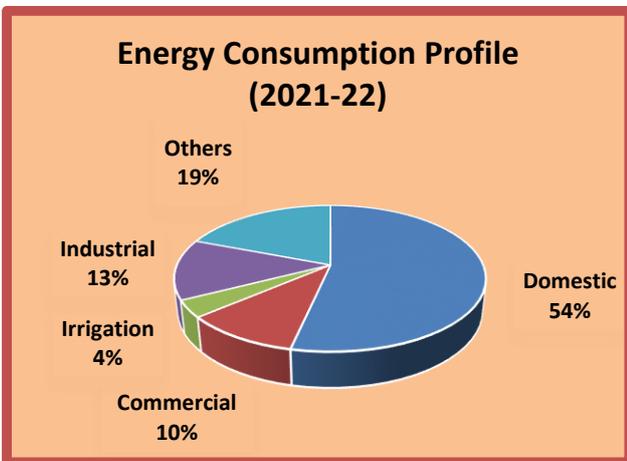


Table 5.15  
**Ladakh**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	77	89	103	118	136	156	179	206	236	270	309
2. Commercial	31	34	37	41	45	50	55	60	66	72	79
3. Public lighting	0	0	0	0	0	0	0	0	0	0	0
4. Public Water Works	3	3	3	4	4	4	5	5	6	6	7
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	1	2	2	2	2	2	3	3	3	3	4
7. HT Industries	1	1	1	1	1	1	1	2	2	2	2
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	45	49	54	60	65	72	79	86	94	103	113
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>158</b>	<b>178</b>	<b>200</b>	<b>225</b>	<b>254</b>	<b>286</b>	<b>321</b>	<b>361</b>	<b>406</b>	<b>456</b>	<b>513</b>
T&D losses -MU	32	33	33	34	35	35	36	36	37	38	38
T&D losses -in %	16.93	15.56	14.29	13.10	12.00	10.98	10.04	9.17	8.36	7.62	6.93
Energy Requirement - MU	190	210	233	259	288	321	357	398	443	494	551
Annual Load Factor - %	35.39	36.81	38.28	39.81	41.40	43.06	44.78	46.57	48.44	50.37	52.39
<b>Peak Demand - MW</b>	<b>61</b>	<b>65</b>	<b>70</b>	<b>74</b>	<b>79</b>	<b>85</b>	<b>91</b>	<b>97</b>	<b>104</b>	<b>112</b>	<b>120</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>190</b>	<b>210</b>	<b>233</b>	<b>259</b>	<b>288</b>	<b>321</b>	<b>357</b>	<b>398</b>	<b>443</b>	<b>494</b>	<b>551</b>
T&D losses (Ex- Bus) -in %	16.96	15.59	14.32	13.13	12.03	11.01	10.07	9.20	8.39	7.65	6.97

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	49.07	50.20	51.33	52.46	53.59	54.71	55.84	56.95	58.06	59.17	60.26
Commercial	19.44	19.03	18.62	18.21	17.79	17.38	16.97	16.56	16.15	15.74	15.33
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	1.38	1.36	1.33	1.30	1.27	1.24	1.21	1.18	1.16	1.13	1.10
Others	30.10	29.41	28.72	28.03	27.35	26.66	25.98	25.31	24.63	23.97	23.31
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

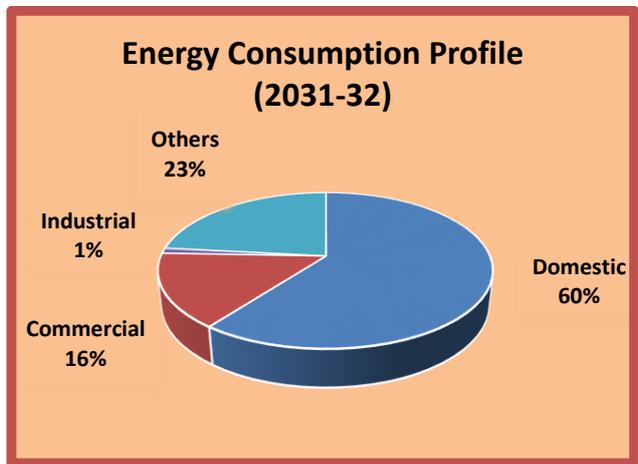
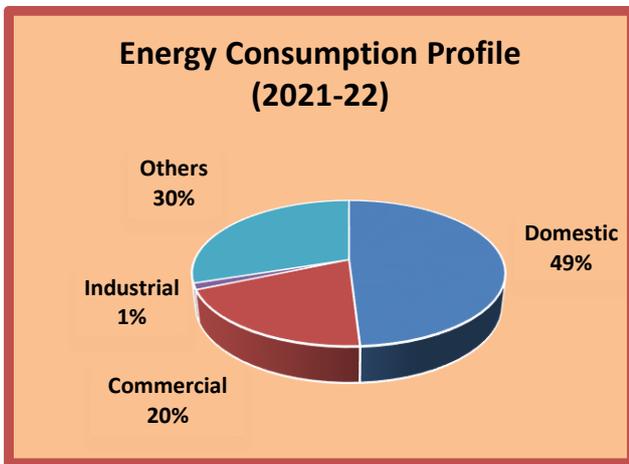


Table 5.16  
**PUNJAB**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	15707	16774	17633	18522	19449	20422	21455	22568	23793	25178	26596
2. Commercial	3798	4017	4246	4487	4743	5018	5318	5654	6037	6490	6959
3. Public lighting	184	190	196	202	208	214	219	225	231	236	241
4. Public Water Works	653	686	720	755	790	826	863	900	937	975	1013
5. Irrigation	12707	13324	13536	13733	13916	14162	14331	14482	14615	14730	14826
6. LT Industries	3535	3664	3793	3921	4049	4175	4300	4423	4543	4660	4774
7. HT Industries	14282	15265	16548	18315	20299	22444	24777	27256	30527	31888	33292
8. Railway Traction	188	194	200	206	211	217	222	227	232	237	242
9. Bulk Supply	1008	1059	1111	1163	1217	1272	1327	1384	1440	1498	1555
10. Others	17	18	18	18	19	19	20	20	20	21	21
<b>Total Energy Consumption</b>	<b>52080</b>	<b>55190</b>	<b>58000</b>	<b>61323</b>	<b>64901</b>	<b>68770</b>	<b>72833</b>	<b>77138</b>	<b>82376</b>	<b>85912</b>	<b>89520</b>
T&D losses -MU	9627	10064	10418	10833	11258	11697	12129	12558	13091	13309	13499
T&D losses -in %	15.60	15.42	15.23	15.01	14.78	14.54	14.28	14.00	13.71	13.41	13.10
Energy Requirement - MU	61707	65254	68418	72156	76160	80467	84961	89696	95467	99221	103019
Annual Load Factor - %	51.96	51.99	52.56	53.13	53.70	54.27	54.84	55.41	55.98	56.55	57.12
<b>Peak Demand - MW</b>	<b>13558</b>	<b>14327</b>	<b>14859</b>	<b>15502</b>	<b>16189</b>	<b>16925</b>	<b>17684</b>	<b>18478</b>	<b>19466</b>	<b>20028</b>	<b>20587</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>62851</b>	<b>66464</b>	<b>69686</b>	<b>73493</b>	<b>77571</b>	<b>81959</b>	<b>86536</b>	<b>91359</b>	<b>97237</b>	<b>101061</b>	<b>104928</b>
T&D losses (Ex- Bus) -in %	17.14	16.96	16.77	16.56	16.33	16.09	15.84	15.57	15.28	14.99	14.68

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	30.16	30.39	30.40	30.20	29.97	29.70	29.46	29.26	28.88	29.31	29.71
Commercial	7.29	7.28	7.32	7.32	7.31	7.30	7.30	7.33	7.33	7.55	7.77
Irrigation	24.40	24.14	23.34	22.39	21.44	20.59	19.68	18.77	17.74	17.15	16.56
Industrial	34.21	34.30	35.07	36.26	37.52	38.71	39.92	41.07	42.57	42.54	42.52
Others	3.94	3.89	3.87	3.82	3.77	3.70	3.64	3.57	3.47	3.45	3.43
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

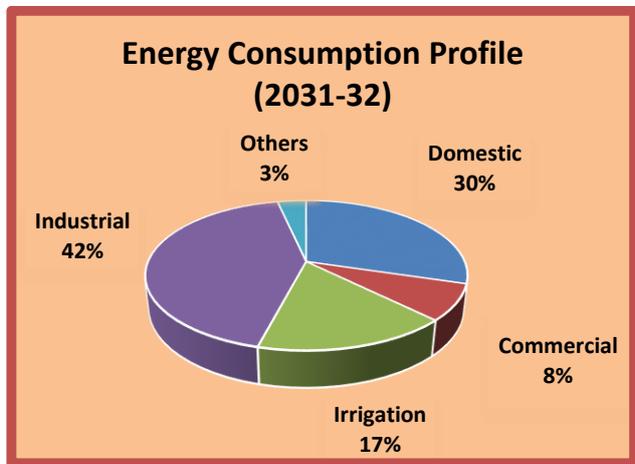
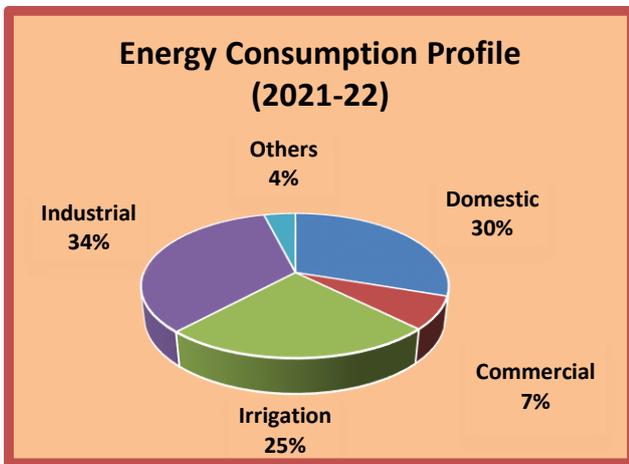


Table 5.17  
**Rajasthan - AVVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	4750	5236	5580	5940	6318	6715	7136	7585	8074	8619	9146
2. Commercial	1362	1574	1691	1815	1949	2093	2249	2423	2619	2847	3078
3. Public lighting	90	92	93	94	96	97	98	99	100	101	102
4. Public Water Works	786	835	887	940	996	1055	1116	1179	1244	1312	1383
5. Irrigation	6693	7752	8411	9099	9563	10066	10565	11078	11604	12144	12697
6. LT Industries	1108	1128	1148	1165	1180	1193	1202	1208	1210	1207	1198
7. HT Industries	4324	4517	4828	5326	5875	6444	7037	7632	8463	8597	8736
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	104	106	109	111	114	116	118	120	122	124	126
10. Others	1115	1142	1168	1194	1219	1243	1267	1290	1312	1333	1353
<b>Total Energy Consumption</b>	<b>20331</b>	<b>22382</b>	<b>23914</b>	<b>25685</b>	<b>27310</b>	<b>29022</b>	<b>30789</b>	<b>32614</b>	<b>34749</b>	<b>36284</b>	<b>37819</b>
T&D losses -MU	4046	4367	4569	4800	4987	5172	5349	5518	5719	5803	5871
T&D losses -in %	16.60	16.33	16.04	15.75	15.44	15.13	14.80	14.47	14.13	13.79	13.44
<b>Energy Requirement - MU</b>	<b>24377</b>	<b>26749</b>	<b>28483</b>	<b>30485</b>	<b>32297</b>	<b>34194</b>	<b>36138</b>	<b>38133</b>	<b>40469</b>	<b>42087</b>	<b>43690</b>
Annual Load Factor - %	60.81	67.61	67.72	67.83	67.95	68.06	68.17	68.28	68.39	68.51	68.62
<b>Peak Demand - MW</b>	<b>4576</b>	<b>4516</b>	<b>4801</b>	<b>5130</b>	<b>5426</b>	<b>5735</b>	<b>6052</b>	<b>6375</b>	<b>6755</b>	<b>7013</b>	<b>7268</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	23.36	23.40	23.33	23.13	23.13	23.14	23.18	23.26	23.24	23.75	24.18
Commercial	6.70	7.03	7.07	7.07	7.14	7.21	7.31	7.43	7.54	7.85	8.14
Irrigation	32.92	34.63	35.17	35.42	35.02	34.69	34.32	33.97	33.39	33.47	33.57
Industrial	26.72	25.22	24.99	25.27	25.83	26.31	26.76	27.11	27.84	27.02	26.27
Others	10.30	9.72	9.44	9.11	8.88	8.65	8.44	8.24	8.00	7.91	7.84
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

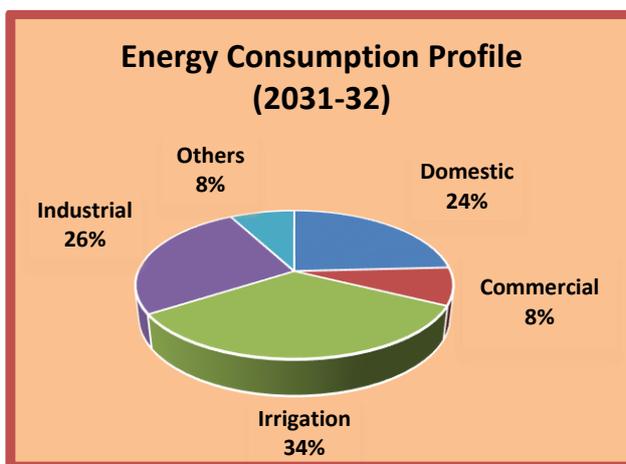
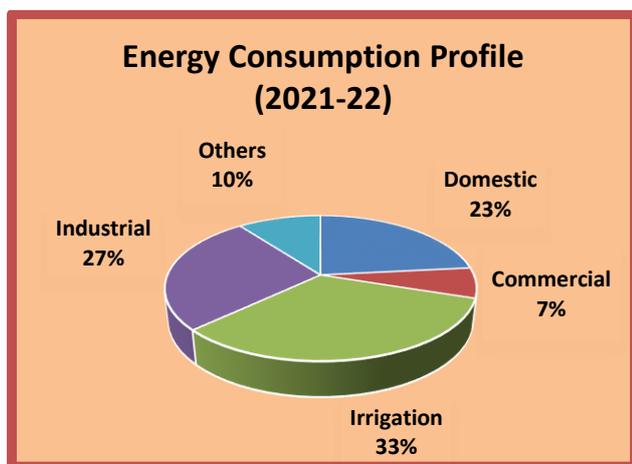


Table 5.18  
**Rajasthan - JVVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	6426	6850	7294	7761	8252	8770	9321	9914	10563	11290	12001
2. Commercial	2488	2676	2875	3087	3312	3552	3809	4089	4396	4740	5081
3. Public lighting	196	206	217	228	240	251	263	276	288	301	314
4. Public Water Works	916	1005	1102	1207	1321	1444	1578	1722	1877	2045	2226
5. Irrigation	9652	15178	19995	21055	22151	23324	24500	25711	26956	28233	29543
6. LT Industries	1104	1128	1151	1172	1192	1208	1222	1232	1238	1239	1242
7. HT Industries	6390	6853	7541	8616	9872	11266	12822	14503	16888	17524	18130
8. Railway Traction	325	322	318	314	310	306	302	297	292	287	281
9. Bulk Supply	186	189	191	194	196	198	199	201	202	203	204
10. Others	107	113	119	125	132	138	145	152	159	166	174
<b>Total Energy Consumption</b>	<b>27791</b>	<b>34519</b>	<b>40804</b>	<b>43759</b>	<b>46976</b>	<b>50457</b>	<b>54162</b>	<b>58096</b>	<b>62859</b>	<b>66029</b>	<b>69197</b>
T&D losses -MU	6857	8183	9283	9546	9817	10091	10358	10614	10961	10979	10963
T&D losses -in %	19.79	19.16	18.53	17.91	17.29	16.67	16.05	15.45	14.85	14.26	13.68
<b>Energy Requirement - MU</b>	<b>34648</b>	<b>42702</b>	<b>50087</b>	<b>53305</b>	<b>56793</b>	<b>60549</b>	<b>64520</b>	<b>68710</b>	<b>73820</b>	<b>77008</b>	<b>80160</b>
Annual Load Factor - %	66.35	75.17	75.25	75.33	75.41	75.49	75.57	75.65	75.73	75.81	75.89
<b>Peak Demand - MW</b>	<b>5961</b>	<b>6485</b>	<b>7598</b>	<b>8078</b>	<b>8597</b>	<b>9156</b>	<b>9746</b>	<b>10368</b>	<b>11127</b>	<b>11596</b>	<b>12058</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	23.12	19.84	17.88	17.74	17.57	17.38	17.21	17.06	16.80	17.10	17.34
Commercial	8.95	7.75	7.05	7.05	7.05	7.04	7.03	7.04	6.99	7.18	7.34
Irrigation	34.73	43.97	49.00	48.12	47.15	46.23	45.24	44.26	42.88	42.76	42.69
Industrial	26.97	23.12	21.30	22.37	23.55	24.72	25.93	27.09	28.84	28.42	27.99
Others	6.23	5.32	4.77	4.73	4.68	4.63	4.59	4.56	4.48	4.55	4.62
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

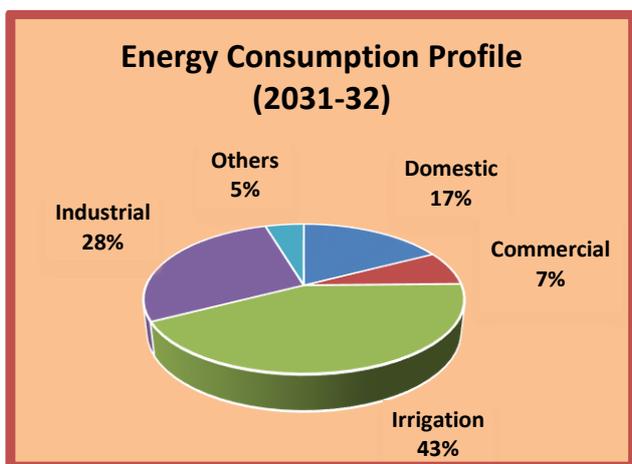
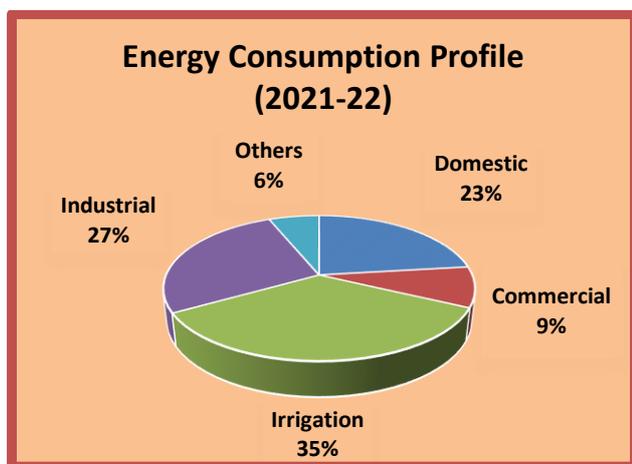


Table 5.19  
**Rajasthan - JdVVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	4178	4418	4666	4924	5193	5473	5768	6083	6425	6807	7175
2. Commercial	1246	1315	1386	1460	1537	1617	1703	1795	1897	2014	2123
3. Public lighting	81	83	85	87	89	91	93	94	96	98	99
4. Public Water Works	1098	1141	1185	1230	1275	1320	1366	1412	1458	1504	1550
5. Irrigation	13398	14184	15002	15856	16743	17718	18685	19685	20720	21788	22889
6. LT Industries	841	854	866	879	890	901	910	919	925	930	932
7. HT Industries	1536	1596	1700	1883	2095	2324	2573	2833	3218	3291	3352
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	331	340	348	357	365	373	381	389	397	404	411
10. Others	266	283	300	318	337	356	377	398	419	442	465
<b>Total Energy Consumption</b>	<b>22975</b>	<b>24212</b>	<b>25540</b>	<b>26994</b>	<b>28523</b>	<b>30173</b>	<b>31855</b>	<b>33607</b>	<b>35556</b>	<b>37277</b>	<b>38996</b>
T&D losses -MU	6847	6883	6920	6966	7004	7045	7066	7077	7102	7057	6992
T&D losses -in %	22.96	22.14	21.32	20.51	19.71	18.93	18.15	17.39	16.65	15.92	15.20
<b>Energy Requirement - MU</b>	<b>29822</b>	<b>31096</b>	<b>32461</b>	<b>33959</b>	<b>35527</b>	<b>37218</b>	<b>38921</b>	<b>40684</b>	<b>42657</b>	<b>44334</b>	<b>45987</b>
Annual Load Factor - %	62.77	65.09	65.17	65.25	65.33	65.41	65.49	65.57	65.65	65.73	65.81
<b>Peak Demand - MW</b>	<b>5424</b>	<b>5453</b>	<b>5686</b>	<b>5941</b>	<b>6207</b>	<b>6495</b>	<b>6784</b>	<b>7083</b>	<b>7417</b>	<b>7699</b>	<b>7977</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	18.18	18.25	18.27	18.24	18.21	18.14	18.11	18.10	18.07	18.26	18.40
Commercial	5.43	5.43	5.43	5.41	5.39	5.36	5.35	5.34	5.33	5.40	5.44
Irrigation	58.31	58.58	58.74	58.74	58.70	58.72	58.65	58.57	58.27	58.45	58.70
Industrial	10.35	10.12	10.05	10.23	10.47	10.69	10.93	11.16	11.65	11.32	10.99
Others	7.73	7.63	7.51	7.38	7.24	7.09	6.96	6.82	6.67	6.57	6.48
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

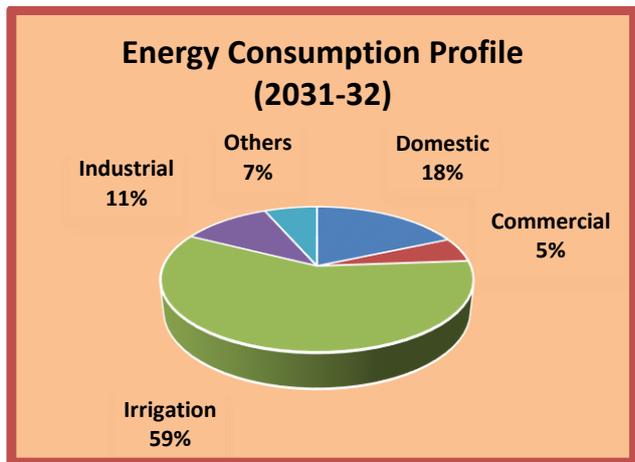
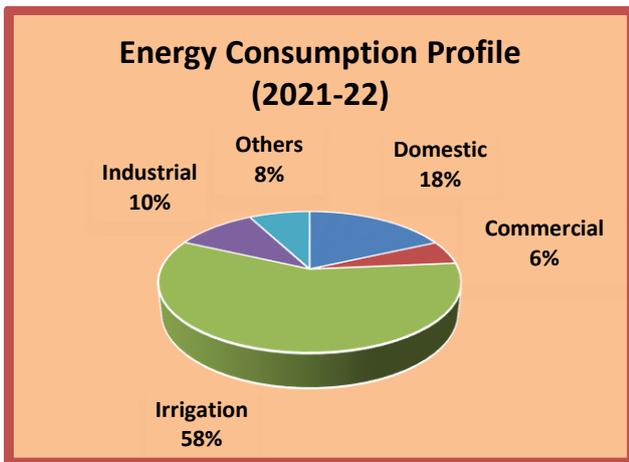


Table 5.20  
**RAJASTHAN**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	15354	16504	17541	18625	19762	20958	22225	23582	25063	26715	28322
2. Commercial	5096	5565	5952	6362	6797	7262	7762	8306	8912	9601	10282
3. Public lighting	367	381	395	409	424	439	454	469	485	500	516
4. Public Water Works	2799	2981	3174	3377	3592	3819	4059	4312	4579	4861	5158
5. Irrigation	29743	37113	43409	46009	48457	51108	53750	56474	59280	62165	65129
6. LT Industries	3052	3110	3165	3216	3262	3302	3335	3359	3374	3376	3371
7. HT Industries	12251	12965	14068	15825	17842	20034	22432	24968	28568	29412	30218
8. Railway Traction	325	322	318	314	310	306	302	297	292	287	281
9. Bulk Supply	621	635	648	662	674	687	699	710	721	732	742
10. Others	1489	1538	1587	1637	1687	1738	1789	1839	1890	1941	1992
<b>Total Energy Consumption</b>	<b>71097</b>	<b>81114</b>	<b>90258</b>	<b>96437</b>	<b>102809</b>	<b>109652</b>	<b>116806</b>	<b>124318</b>	<b>133164</b>	<b>139590</b>	<b>146012</b>
T&D losses -MU	17750	19433	20773	21312	21808	22308	22773	23209	23782	23840	23826
T&D losses -in %	19.98	19.33	18.71	18.10	17.50	16.91	16.32	15.73	15.15	14.59	14.03
Energy Requirement - MU	88848	100547	111031	117749	124617	131961	139579	147527	156946	163430	169837
Annual Load Factor - %	64.18	70.45	70.79	70.90	71.02	71.14	71.27	71.39	71.53	71.62	71.72
<b>Peak Demand - MW</b>	<b>15803</b>	<b>16291</b>	<b>17906</b>	<b>18959</b>	<b>20030</b>	<b>21175</b>	<b>22358</b>	<b>23590</b>	<b>25048</b>	<b>26048</b>	<b>27032</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>89918</b>	<b>101757</b>	<b>112368</b>	<b>119167</b>	<b>126118</b>	<b>133550</b>	<b>141260</b>	<b>149303</b>	<b>158836</b>	<b>165398</b>	<b>171883</b>
T&D losses (Ex- Bus) -in %	20.93	20.29	19.68	19.07	18.48	17.89	17.31	16.73	16.16	15.60	15.05

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	21.60	20.35	19.43	19.31	19.22	19.11	19.03	18.97	18.82	19.14	19.40
Commercial	7.17	6.86	6.59	6.60	6.61	6.62	6.64	6.68	6.69	6.88	7.04
Irrigation	41.83	45.75	48.09	47.71	47.13	46.61	46.02	45.43	44.52	44.53	44.61
Industrial	21.52	19.82	19.09	19.74	20.53	21.28	22.06	22.79	23.99	23.49	23.00
Others	7.88	7.22	6.78	6.64	6.51	6.37	6.25	6.14	5.98	5.96	5.95
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

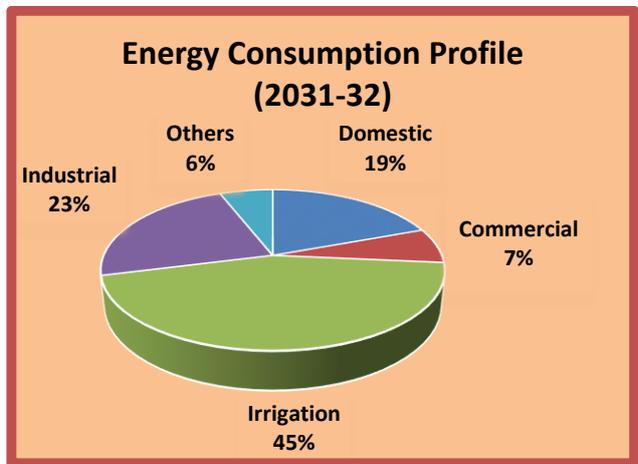
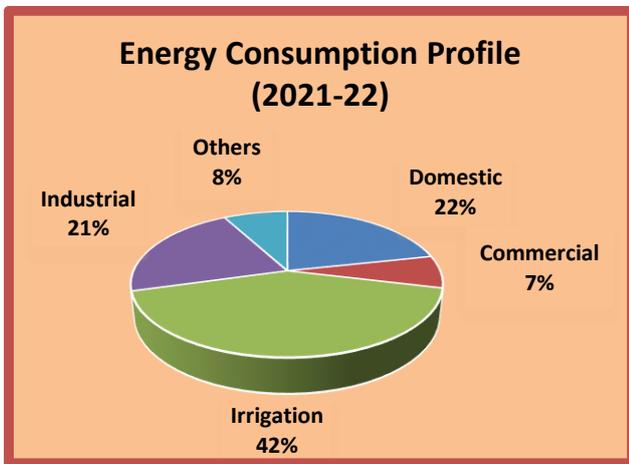


Table 5.21  
**Uttar Pradesh - DVVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	7662	8653	9312	10011	10754	11544	12384	13281	14243	15283	16337
2. Commercial	1023	1200	1289	1385	1490	1603	1729	1870	2032	2222	2417
3. Public lighting	91	96	102	108	114	120	126	133	140	147	155
4. Public Water Works	352	371	390	410	430	451	473	495	518	541	565
5. Irrigation	5651	6358	6810	7289	7794	8354	8922	9520	10148	10808	11499
6. LT Industries	547	562	577	591	605	618	631	642	653	662	670
7. HT Industries	2572	2849	3007	3292	3623	3983	4377	4792	5416	5560	5694
8. Railway Traction	393	408	423	439	454	469	485	501	516	532	547
9. Bulk Supply	2305	2554	2638	2723	2807	2891	2975	3058	3141	3222	3303
10. Others	299	419	445	474	503	534	566	599	634	670	708
<b>Total Energy Consumption</b>	<b>20895</b>	<b>23469</b>	<b>24993</b>	<b>26720</b>	<b>28574</b>	<b>30568</b>	<b>32668</b>	<b>34892</b>	<b>37440</b>	<b>39647</b>	<b>41894</b>
T&D losses -MU	7259	7727	7795	7889	7980	8070	8148	8217	8318	8306	8269
T&D losses -in %	25.78	24.77	23.77	22.79	21.83	20.89	19.96	19.06	18.18	17.32	16.48
<b>Energy Requirement - MU</b>	<b>28154</b>	<b>31196</b>	<b>32788</b>	<b>34609</b>	<b>36554</b>	<b>38638</b>	<b>40816</b>	<b>43109</b>	<b>45759</b>	<b>47953</b>	<b>50164</b>
Annual Load Factor - %	45.46	49.28	49.16	49.01	48.85	48.69	48.54	48.38	48.23	48.07	47.92
<b>Peak Demand - MW</b>	<b>7070</b>	<b>7226</b>	<b>7613</b>	<b>8062</b>	<b>8542</b>	<b>9058</b>	<b>9600</b>	<b>10171</b>	<b>10831</b>	<b>11387</b>	<b>11950</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	36.67	36.87	37.26	37.47	37.64	37.77	37.91	38.06	38.04	38.55	38.99
Commercial	4.89	5.11	5.16	5.18	5.21	5.25	5.29	5.36	5.43	5.60	5.77
Irrigation	27.05	27.09	27.25	27.28	27.28	27.33	27.31	27.28	27.11	27.26	27.45
Industrial	14.93	14.54	14.34	14.53	14.80	15.05	15.33	15.58	16.21	15.69	15.19
Others	16.47	16.39	16.00	15.54	15.08	14.61	14.16	13.72	13.22	12.90	12.60
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

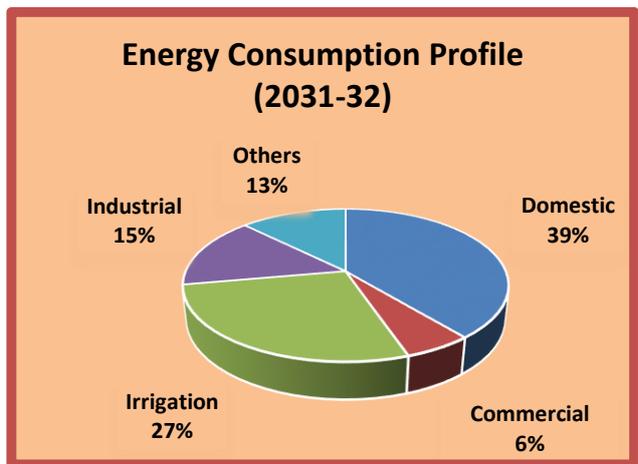
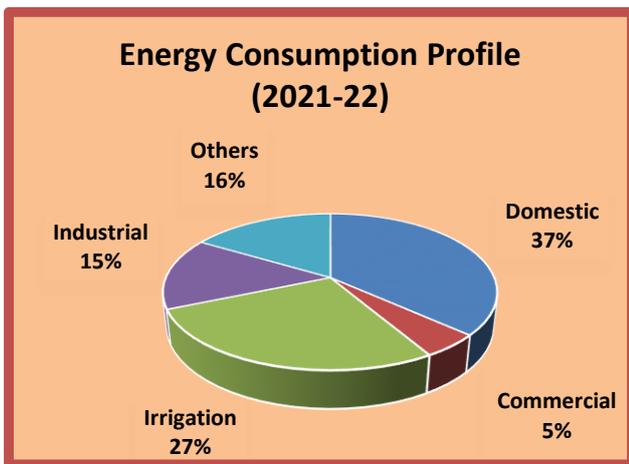
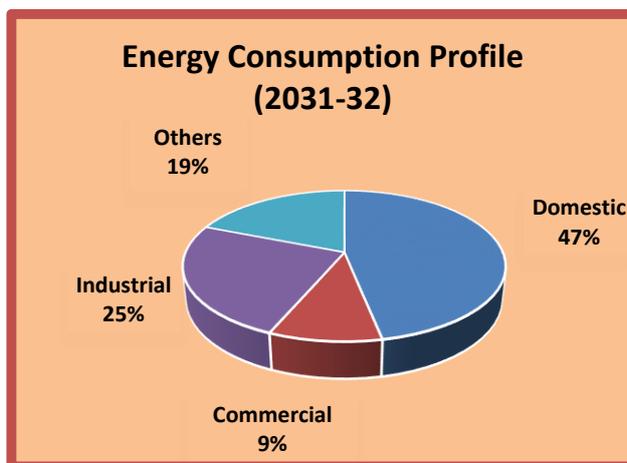
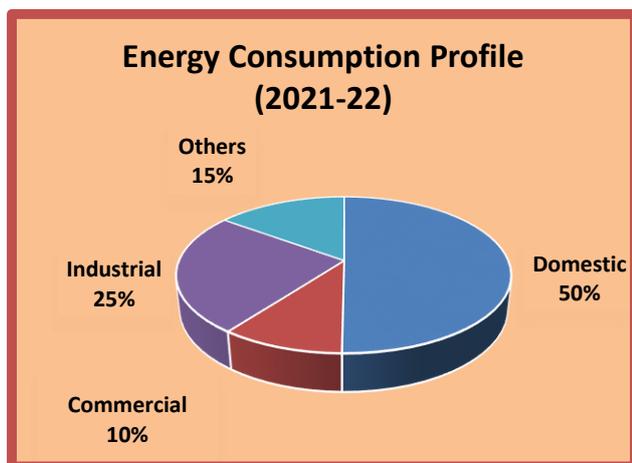


Table 5.22  
**Uttar Pradesh - KESCO**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1595	1759	1828	1899	1970	2041	2113	2186	2259	2332	2405
2. Commercial	319	380	392	405	417	429	442	454	466	478	490
3. Public lighting	39	41	42	44	46	47	49	51	53	54	56
4. Public Water Works	120	133	147	163	180	199	219	241	265	292	321
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	336	389	404	419	434	450	465	481	497	512	528
7. HT Industries	456	661	669	677	685	693	701	709	717	726	734
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	164	172	179	187	195	203	211	220	228	237	245
10. Others	150	209	223	237	251	267	283	300	317	335	354
<b>Total Energy Consumption</b>	<b>3178</b>	<b>3744</b>	<b>3885</b>	<b>4030</b>	<b>4178</b>	<b>4329</b>	<b>4484</b>	<b>4642</b>	<b>4802</b>	<b>4967</b>	<b>5134</b>
T&D losses -MU	549	633	641	649	655	661	666	669	672	673	674
T&D losses -in %	14.73	14.45	14.16	13.86	13.56	13.25	12.93	12.60	12.27	11.94	11.61
<b>Energy Requirement - MU</b>	<b>3728</b>	<b>4376</b>	<b>4526</b>	<b>4679</b>	<b>4833</b>	<b>4990</b>	<b>5149</b>	<b>5311</b>	<b>5474</b>	<b>5640</b>	<b>5808</b>
Annual Load Factor - %	57.42	62.56	62.64	62.66	62.62	62.51	62.34	62.12	61.82	61.59	61.40
<b>Peak Demand - MW</b>	<b>741</b>	<b>799</b>	<b>825</b>	<b>852</b>	<b>881</b>	<b>911</b>	<b>943</b>	<b>976</b>	<b>1011</b>	<b>1045</b>	<b>1080</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	50.18	46.99	47.06	47.11	47.14	47.15	47.13	47.10	47.04	46.95	46.85
Commercial	10.03	10.14	10.09	10.04	9.98	9.92	9.85	9.78	9.71	9.63	9.55
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	24.90	28.05	27.62	27.20	26.79	26.39	26.01	25.64	25.28	24.93	24.59
Others	14.89	14.82	15.23	15.65	16.09	16.54	17.00	17.48	17.97	18.48	19.01
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table 5.23**  
**Uttar Pradesh - MVVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	11522	13450	14386	15372	16411	17508	18666	19894	21203	22612	24024
2. Commercial	1531	1645	1751	1864	1986	2119	2266	2432	2625	2857	3090
3. Public lighting	309	321	334	346	359	372	385	398	411	424	437
4. Public Water Works	411	441	473	506	541	578	617	657	700	745	792
5. Irrigation	3590	4453	4899	5385	5915	6510	7141	7827	8570	9375	10246
6. LT Industries	540	552	563	574	584	594	602	610	616	620	623
7. HT Industries	1492	1630	1712	1866	2045	2238	2448	2669	3003	3062	3116
8. Railway Traction	219	240	262	285	311	339	368	400	435	472	511
9. Bulk Supply	790	847	907	971	1038	1108	1183	1261	1343	1429	1519
10. Others	269	687	731	777	825	876	928	983	1040	1100	1161
<b>Total Energy Consumption</b>	<b>20675</b>	<b>24265</b>	<b>26016</b>	<b>27946</b>	<b>30015</b>	<b>32240</b>	<b>34605</b>	<b>37131</b>	<b>39946</b>	<b>42696</b>	<b>45521</b>
T&D losses -MU	5343	6023	6196	6381	6563	6746	6922	7094	7283	7422	7538
T&D losses -in %	20.54	19.89	19.24	18.59	17.94	17.30	16.67	16.04	15.42	14.81	14.21
<b>Energy Requirement - MU</b>	<b>26018</b>	<b>30288</b>	<b>32213</b>	<b>34327</b>	<b>36578</b>	<b>38986</b>	<b>41527</b>	<b>44225</b>	<b>47229</b>	<b>50117</b>	<b>53059</b>
Annual Load Factor - %	45.30	50.16	50.02	49.88	49.75	49.61	49.48	49.34	49.21	49.08	48.94
<b>Peak Demand - MW</b>	<b>6556</b>	<b>6893</b>	<b>7352</b>	<b>7856</b>	<b>8394</b>	<b>8971</b>	<b>9581</b>	<b>10231</b>	<b>10956</b>	<b>11658</b>	<b>12375</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	55.73	55.43	55.29	55.00	54.68	54.30	53.94	53.58	53.08	52.96	52.78
Commercial	7.40	6.78	6.73	6.67	6.62	6.57	6.55	6.55	6.57	6.69	6.79
Irrigation	17.37	18.35	18.83	19.27	19.71	20.19	20.64	21.08	21.45	21.96	22.51
Industrial	9.83	8.99	8.75	8.73	8.76	8.78	8.82	8.83	9.06	8.63	8.21
Others	9.67	10.45	10.40	10.32	10.24	10.15	10.06	9.96	9.84	9.77	9.71
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

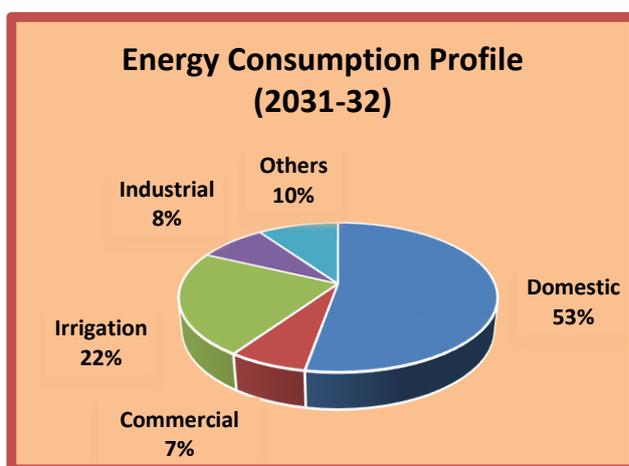
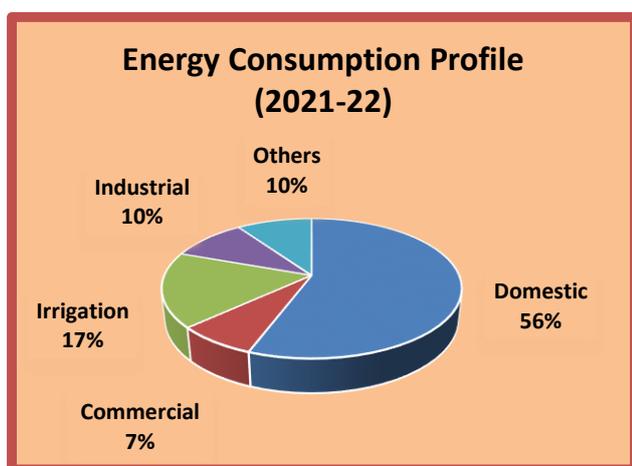
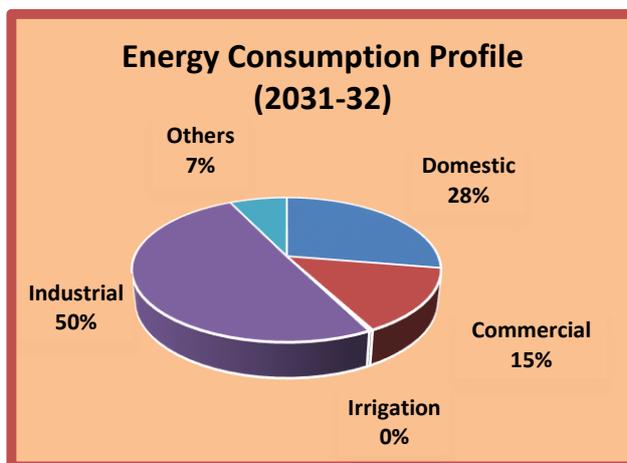
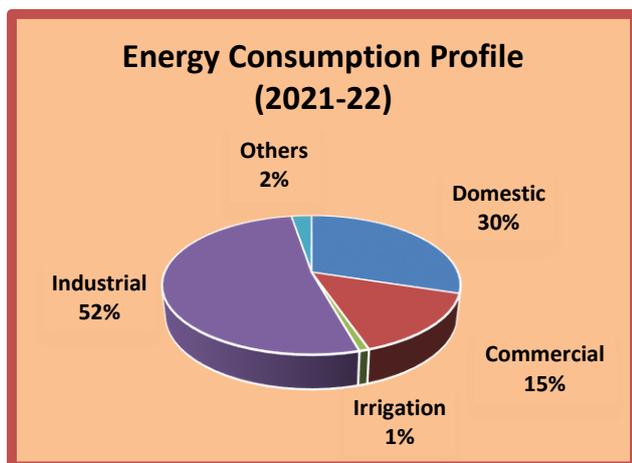


Table 5.24  
**Uttar Pradesh - NPCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	696	837	930	1032	1145	1269	1407	1559	1730	1922	2126
2. Commercial	347	464	512	566	624	688	758	836	923	1019	1123
3. Public lighting	34	36	37	38	40	41	43	44	46	47	49
4. Public Water Works	24	26	28	30	32	35	37	40	43	46	49
5. Irrigation	21	22	22	23	23	23	24	24	24	25	25
6. LT Industries	98	128	142	156	171	188	205	225	245	267	290
7. HT Industries	1107	1245	1377	1579	1818	2090	2401	2746	3237	3412	3592
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	2	46	73	104	144	188	241	293	346	399	451
<b>Total Energy Consumption</b>	<b>2330</b>	<b>2804</b>	<b>3121</b>	<b>3528</b>	<b>3997</b>	<b>4523</b>	<b>5116</b>	<b>5768</b>	<b>6593</b>	<b>7136</b>	<b>7704</b>
T&D losses -MU	300	361	401	453	513	581	657	740	845	915	987
T&D losses -in %	11.40	11.40	11.39	11.39	11.38	11.38	11.37	11.37	11.36	11.36	11.36
<b>Energy Requirement - MU</b>	<b>2630</b>	<b>3165</b>	<b>3522</b>	<b>3981</b>	<b>4511</b>	<b>5104</b>	<b>5773</b>	<b>6507</b>	<b>7438</b>	<b>8051</b>	<b>8690</b>
Annual Load Factor - %	58.94	62.41	62.24	62.12	62.00	61.88	61.76	61.64	61.52	61.40	61.28
<b>Peak Demand - MW</b>	<b>509</b>	<b>579</b>	<b>646</b>	<b>732</b>	<b>831</b>	<b>942</b>	<b>1067</b>	<b>1205</b>	<b>1380</b>	<b>1497</b>	<b>1619</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	29.86	29.86	29.81	29.27	28.65	28.07	27.50	27.04	26.24	26.93	27.59
Commercial	14.90	16.54	16.42	16.04	15.61	15.21	14.82	14.50	13.99	14.28	14.57
Irrigation	0.92	0.78	0.71	0.64	0.57	0.52	0.46	0.42	0.37	0.35	0.32
Industrial	51.73	48.97	48.65	49.16	49.77	50.36	50.94	51.50	52.81	51.56	50.39
Others	2.60	3.85	4.41	4.90	5.40	5.84	6.27	6.55	6.59	6.89	7.12
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table 5.25**  
**Uttar Pradesh - PUVVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	13575	16304	17456	18672	19956	21311	22744	24264	25887	27637	29386
2. Commercial	1985	2393	2524	2662	2809	2969	3146	3347	3584	3871	4165
3. Public lighting	142	146	151	155	160	165	169	174	178	182	187
4. Public Water Works	398	408	419	429	440	450	460	469	479	488	496
5. Irrigation	4207	4920	5166	5419	5681	5967	6246	6532	6824	7123	7427
6. LT Industries	603	636	671	706	742	779	816	853	889	924	958
7. HT Industries	1288	1343	1441	1610	1810	2030	2276	2540	2932	2990	3044
8. Railway Traction	719	736	752	769	785	800	815	829	843	856	869
9. Bulk Supply	433	506	532	559	586	615	644	674	705	737	769
10. Others	179	591	629	669	710	754	799	846	895	947	1000
<b>Total Energy Consumption</b>	<b>23527</b>	<b>27984</b>	<b>29740</b>	<b>31650</b>	<b>33678</b>	<b>35838</b>	<b>38113</b>	<b>40528</b>	<b>43216</b>	<b>45755</b>	<b>48300</b>
T&D losses -MU	6470	7393	7541	7695	7844	7989	8124	8253	8400	8481	8530
T&D losses -in %	21.57	20.90	20.23	19.56	18.89	18.23	17.57	16.92	16.27	15.64	15.01
<b>Energy Requirement - MU</b>	<b>29997</b>	<b>35377</b>	<b>37281</b>	<b>39346</b>	<b>41522</b>	<b>43827</b>	<b>46237</b>	<b>48781</b>	<b>51616</b>	<b>54236</b>	<b>56830</b>
Annual Load Factor - %	51.98	58.80	58.70	58.61	58.52	58.42	58.33	58.24	58.15	58.06	57.96
<b>Peak Demand - MW</b>	<b>6588</b>	<b>6868</b>	<b>7250</b>	<b>7664</b>	<b>8100</b>	<b>8563</b>	<b>9048</b>	<b>9561</b>	<b>10133</b>	<b>10664</b>	<b>11192</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	57.70	58.26	58.70	59.00	59.26	59.46	59.67	59.87	59.90	60.40	60.84
Commercial	8.44	8.55	8.49	8.41	8.34	8.28	8.25	8.26	8.29	8.46	8.62
Irrigation	17.88	17.58	17.37	17.12	16.87	16.65	16.39	16.12	15.79	15.57	15.38
Industrial	8.03	7.07	7.10	7.32	7.58	7.84	8.11	8.37	8.84	8.56	8.28
Others	7.95	8.53	8.35	8.15	7.96	7.77	7.57	7.38	7.17	7.01	6.87
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

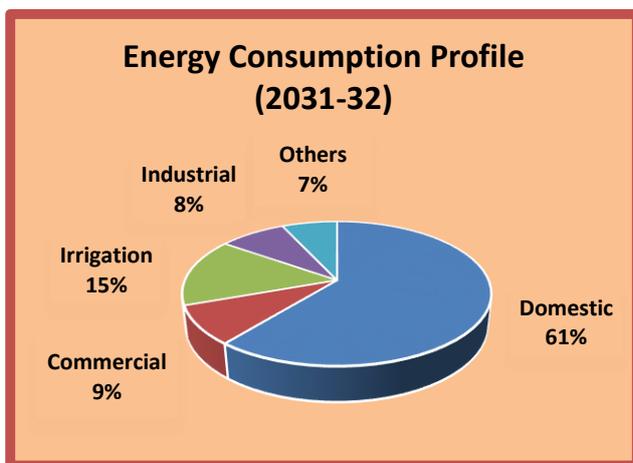
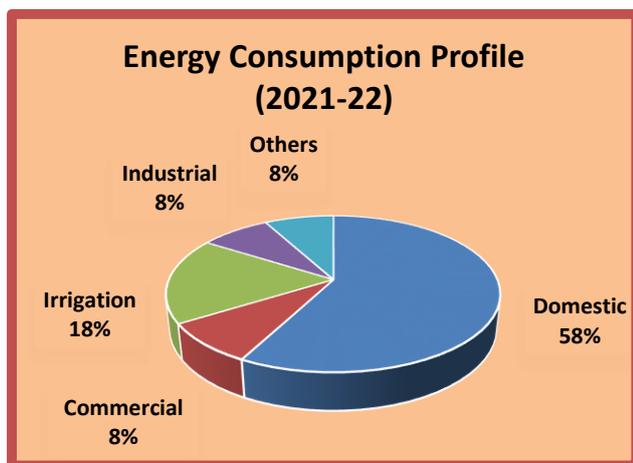


Table 5.26  
**Uttar Pradesh - PVVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	12245	13657	14773	15965	17238	18600	20059	21625	23315	25153	27033
2. Commercial	1682	2025	2196	2381	2583	2804	3049	3324	3638	4005	4384
3. Public lighting	186	190	194	198	202	206	210	213	217	220	223
4. Public Water Works	434	473	515	559	607	659	714	773	836	904	976
5. Irrigation	6829	7715	8257	8830	9436	10107	10786	11500	12249	13036	13859
6. LT Industries	1103	1152	1201	1250	1300	1349	1398	1445	1490	1533	1572
7. HT Industries	5302	8244	8612	9238	9953	10720	11552	12420	13698	13808	13896
8. Railway Traction	210	218	227	235	244	253	262	270	279	288	297
9. Bulk Supply	1317	1371	1426	1481	1537	1593	1650	1708	1766	1823	1881
10. Others	598	1137	1210	1287	1366	1450	1537	1628	1723	1821	1923
<b>Total Energy Consumption</b>	<b>29906</b>	<b>36181</b>	<b>38610</b>	<b>41425</b>	<b>44467</b>	<b>47741</b>	<b>51216</b>	<b>54906</b>	<b>59212</b>	<b>62591</b>	<b>66045</b>
T&D losses -MU	6881	7923	8040	8196	8353	8507	8651	8784	8964	8960	8933
T&D losses -in %	18.70	17.96	17.23	16.52	15.81	15.12	14.45	13.79	13.15	12.52	11.91
<b>Energy Requirement - MU</b>	<b>36787</b>	<b>44104</b>	<b>46650</b>	<b>49621</b>	<b>52820</b>	<b>56249</b>	<b>59867</b>	<b>63690</b>	<b>68176</b>	<b>71552</b>	<b>74978</b>
Annual Load Factor - %	44.92	51.75	51.90	52.05	52.20	52.35	52.50	52.65	52.80	52.95	53.10
<b>Peak Demand - MW</b>	<b>9349</b>	<b>9728</b>	<b>10260</b>	<b>10882</b>	<b>11550</b>	<b>12265</b>	<b>13016</b>	<b>13808</b>	<b>14739</b>	<b>15425</b>	<b>16118</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	40.94	37.75	38.26	38.54	38.77	38.96	39.17	39.39	39.38	40.19	40.93
Commercial	5.63	5.60	5.69	5.75	5.81	5.87	5.95	6.05	6.14	6.40	6.64
Irrigation	22.84	21.32	21.39	21.32	21.22	21.17	21.06	20.94	20.69	20.83	20.98
Industrial	21.42	25.97	25.42	25.32	25.31	25.28	25.28	25.25	25.65	24.51	23.42
Others	9.18	9.37	9.25	9.08	8.90	8.72	8.54	8.37	8.14	8.08	8.03
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

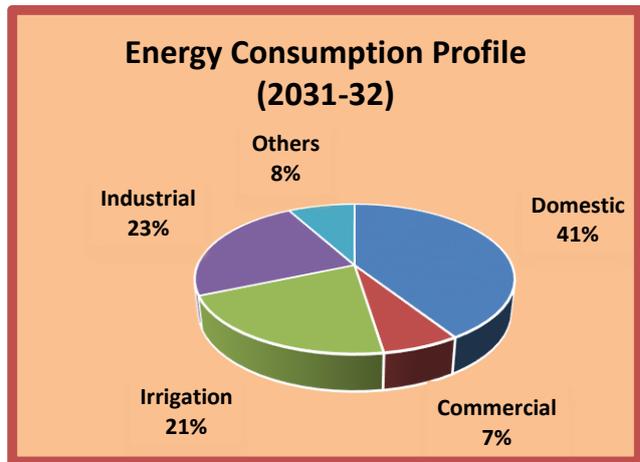
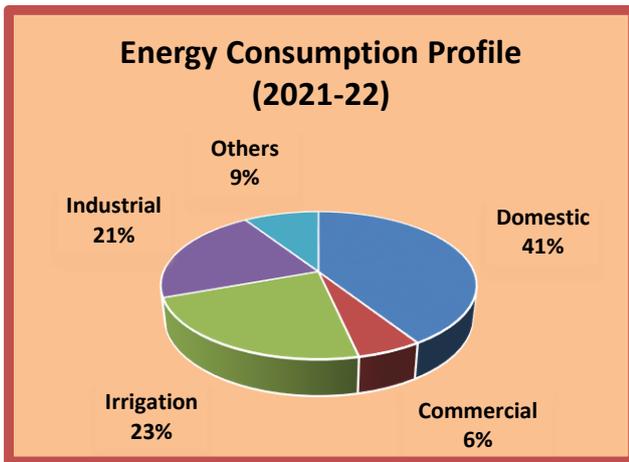


Table 5.27  
**UTTAR PRADESH**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	47294	54660	58684	62951	67474	72273	77373	82810	88637	94938	101310
2. Commercial	6887	8107	8665	9263	9909	10613	11390	12264	13267	14453	15669
3. Public lighting	800	830	860	890	921	951	982	1013	1044	1076	1107
4. Public Water Works	1740	1852	1971	2097	2230	2371	2519	2676	2841	3016	3199
5. Irrigation	20299	23467	25154	26946	28848	30961	33119	35402	37816	40366	43057
6. LT Industries	3226	3419	3556	3696	3836	3977	4117	4255	4389	4518	4639
7. HT Industries	12216	15972	16818	18262	19934	21753	23755	25876	29003	29558	30076
8. Railway Traction	1541	1601	1664	1728	1793	1861	1930	2001	2074	2148	2225
9. Bulk Supply	5010	5449	5682	5920	6163	6411	6664	6921	7182	7448	7717
10. Others	1498	3089	3311	3547	3800	4068	4354	4650	4955	5271	5597
<b>Total Energy Consumption</b>	<b>100511</b>	<b>118447</b>	<b>126365</b>	<b>135299</b>	<b>144909</b>	<b>155239</b>	<b>166202</b>	<b>177867</b>	<b>191210</b>	<b>202792</b>	<b>214598</b>
T&D losses -MU	26801	30059	30614	31263	31909	32554	33167	33756	34482	34757	34931
T&D losses -in %	21.05	20.24	19.50	18.77	18.05	17.33	16.64	15.95	15.28	14.63	14.00
Energy Requirement - MU	127312	148507	156979	166562	176818	187793	199369	211623	225692	237549	249529
Annual Load Factor - %	58.16	65.13	65.09	65.04	64.98	64.93	64.87	64.82	64.76	64.70	64.64
<b>Peak Demand - MW</b>	<b>24991</b>	<b>26028</b>	<b>27531</b>	<b>29235</b>	<b>31061</b>	<b>33017</b>	<b>35082</b>	<b>37270</b>	<b>39781</b>	<b>41910</b>	<b>44066</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>129580</b>	<b>151152</b>	<b>159775</b>	<b>169529</b>	<b>179967</b>	<b>191138</b>	<b>202920</b>	<b>215392</b>	<b>229712</b>	<b>241780</b>	<b>253974</b>
T&D losses (Ex- Bus) -in %	22.43	21.64	20.91	20.19	19.48	18.78	18.09	17.42	16.76	16.13	15.50

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	47.05	46.15	46.44	46.53	46.56	46.56	46.55	46.56	46.36	46.82	47.21
Commercial	6.85	6.84	6.86	6.85	6.84	6.84	6.85	6.89	6.94	7.13	7.30
Irrigation	20.20	19.81	19.91	19.92	19.91	19.94	19.93	19.90	19.78	19.91	20.06
Industrial	15.36	16.37	16.12	16.23	16.40	16.57	16.77	16.94	17.46	16.80	16.18
Others	10.53	10.83	10.67	10.48	10.29	10.09	9.90	9.70	9.46	9.35	9.25
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

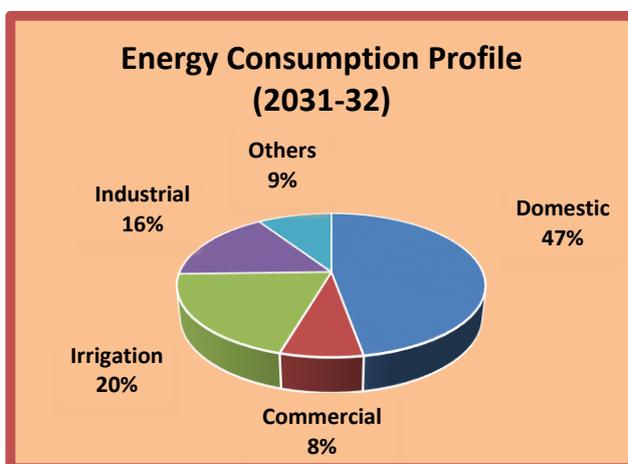
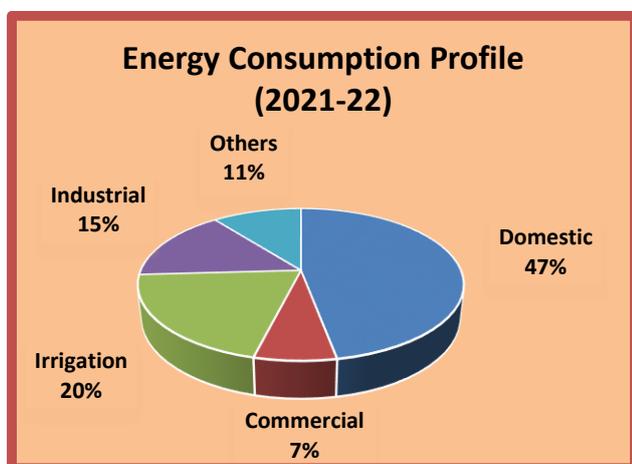


Table 5.28  
**UTTARAKHAND**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	3565	3809	4067	4338	4623	4926	5248	5592	5965	6375	6793
2. Commercial	1794	1891	1990	2093	2200	2311	2426	2548	2678	2820	2961
3. Public lighting	54	57	60	63	66	70	73	77	80	84	88
4. Public Water Works	515	543	572	602	632	664	696	730	764	799	835
5. Irrigation	407	421	435	448	462	477	491	505	518	531	545
6. LT Industries	320	327	334	341	347	352	358	362	366	369	371
7. HT Industries	6307	6574	6893	7296	7733	8189	8669	9160	9788	10019	10232
8. Railway Traction	30	32	33	35	37	39	41	43	45	47	49
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	237	250	265	280	295	311	328	345	362	380	399
<b>Total Energy Consumption</b>	<b>13228</b>	<b>13903</b>	<b>14648</b>	<b>15495</b>	<b>16395</b>	<b>17339</b>	<b>18330</b>	<b>19361</b>	<b>20567</b>	<b>21424</b>	<b>22273</b>
T&D losses -MU	2041	2113	2190	2276	2364	2451	2537	2621	2721	2766	2804
T&D losses -in %	13.37	13.19	13.01	12.81	12.60	12.38	12.16	11.92	11.68	11.44	11.18
Energy Requirement - MU	15269	16016	16838	17771	18759	19790	20867	21982	23287	24191	25077
Annual Load Factor - %	70.46	70.23	70.09	69.83	69.70	69.54	69.39	69.26	69.11	68.98	68.83
<b>Peak Demand - MW</b>	<b>2474</b>	<b>2603</b>	<b>2742</b>	<b>2905</b>	<b>3072</b>	<b>3249</b>	<b>3433</b>	<b>3623</b>	<b>3847</b>	<b>4004</b>	<b>4159</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>15541</b>	<b>16301</b>	<b>17138</b>	<b>18087</b>	<b>19093</b>	<b>20142</b>	<b>21238</b>	<b>22374</b>	<b>23702</b>	<b>24622</b>	<b>25524</b>
T&D losses (Ex- Bus) -in %	14.89	14.71	14.53	14.33	14.13	13.92	13.69	13.47	13.23	12.99	12.74

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.95	27.40	27.76	27.99	28.20	28.41	28.63	28.88	29.00	29.76	30.50
Commercial	13.56	13.60	13.59	13.51	13.42	13.33	13.24	13.16	13.02	13.16	13.30
Irrigation	3.07	3.02	2.97	2.89	2.82	2.75	2.68	2.61	2.52	2.48	2.45
Industrial	50.10	49.63	49.33	49.29	49.28	49.26	49.25	49.18	49.37	48.49	47.60
Others	6.32	6.35	6.35	6.32	6.29	6.25	6.21	6.17	6.08	6.12	6.16
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

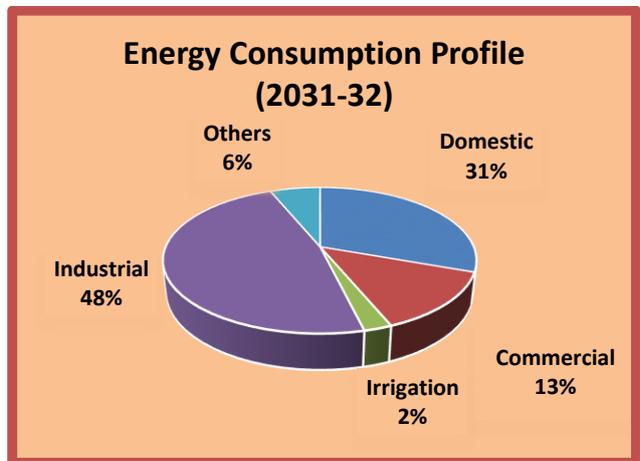
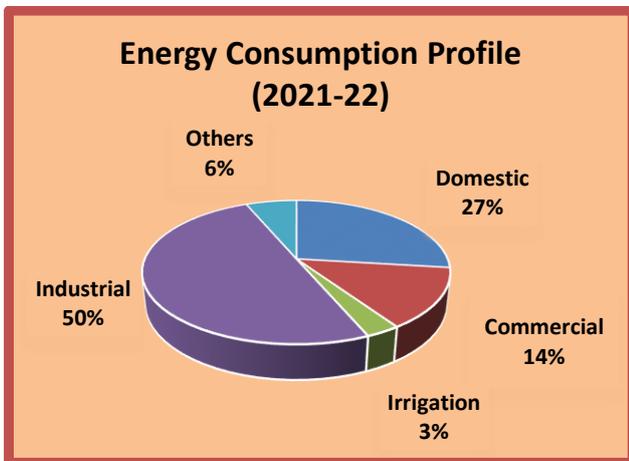


Table 5.29  
**CHHATTISGARH**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	6945	7640	8068	8513	8978	9465	9977	10519	11101	11734	12333
2. Commercial	1602	1978	2039	2101	2166	2237	2314	2402	2507	2640	2767
3. Public lighting	97	100	102	104	106	108	110	112	114	116	118
4. Public Water Works	494	553	617	689	769	856	953	1061	1179	1309	1452
5. Irrigation	6318	7138	7605	8095	8608	9145	9707	10293	10905	11542	12205
6. LT Industries	618	642	666	690	713	736	758	778	796	810	820
7. HT Industries	9187	10368	11291	12540	13938	15445	17074	18791	21010	21934	22990
8. Railway Traction	987	1011	1035	1059	1082	1105	1127	1148	1168	1188	1206
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	32	534	562	591	621	652	684	717	751	786	821
<b>Total Energy Consumption</b>	<b>26281</b>	<b>29964</b>	<b>31985</b>	<b>34383</b>	<b>36982</b>	<b>39750</b>	<b>42705</b>	<b>45822</b>	<b>49531</b>	<b>52058</b>	<b>54712</b>
T&D losses -MU	5360	5948	6173	6445	6725	7005	7286	7560	7895	8009	8115
T&D losses -in %	16.94	16.56	16.18	15.79	15.39	14.98	14.57	14.16	13.75	13.33	12.92
Energy Requirement - MU	31641	35911	38159	40828	43707	46755	49991	53382	57426	60067	62827
Annual Load Factor - %	71.82	76.52	76.31	76.00	75.69	75.38	75.07	74.76	74.45	74.14	73.84
<b>Peak Demand - MW</b>	<b>5029</b>	<b>5358</b>	<b>5708</b>	<b>6132</b>	<b>6592</b>	<b>7081</b>	<b>7602</b>	<b>8152</b>	<b>8805</b>	<b>9248</b>	<b>9713</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>31948</b>	<b>36260</b>	<b>38528</b>	<b>41223</b>	<b>44130</b>	<b>47208</b>	<b>50475</b>	<b>53900</b>	<b>57983</b>	<b>60649</b>	<b>63436</b>
T&D losses (Ex- Bus) -in %	17.74	17.36	16.98	16.59	16.20	15.80	15.39	14.99	14.58	14.16	13.75

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.43	25.50	25.22	24.76	24.28	23.81	23.36	22.96	22.41	22.54	22.54
Commercial	6.10	6.60	6.37	6.11	5.86	5.63	5.42	5.24	5.06	5.07	5.06
Irrigation	24.04	23.82	23.78	23.54	23.28	23.01	22.73	22.46	22.02	22.17	22.31
Industrial	37.31	36.75	37.38	38.48	39.62	40.71	41.76	42.71	44.03	43.69	43.52
Others	6.13	7.33	7.24	7.11	6.97	6.85	6.73	6.63	6.48	6.53	6.57
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

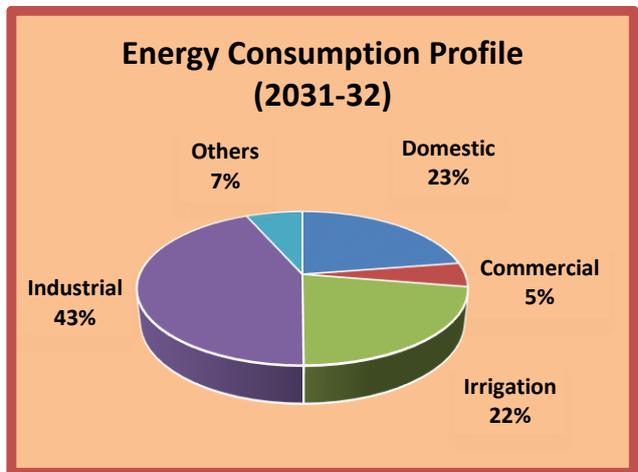
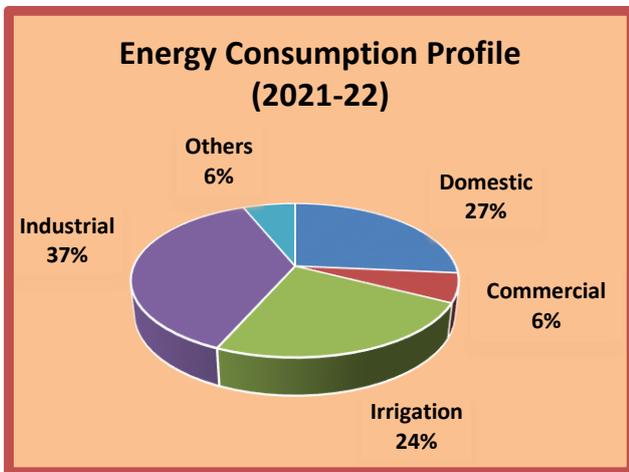


Table 5.30  
**DADAR & NAGAR HAVELI**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	172	239	261	285	311	340	371	405	443	483	527
2. Commercial	38	40	42	45	47	50	53	57	61	66	71
3. Public lighting	3	3	3	3	4	4	4	4	4	4	5
4. Public Water Works	6	6	6	6	7	7	7	8	8	9	9
5. Irrigation	5	5	5	6	6	6	6	6	6	6	6
6. LT Industries	216	273	282	291	300	308	316	325	332	340	347
7. HT Industries	5940	6695	7008	7381	7778	8192	8624	9067	9604	9876	10139
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>6380</b>	<b>7261</b>	<b>7608</b>	<b>8017</b>	<b>8453</b>	<b>8906</b>	<b>9382</b>	<b>9870</b>	<b>10459</b>	<b>10784</b>	<b>11105</b>
T&D losses -MU	249	283	296	312	329	347	366	385	408	420	433
T&D losses -in %	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
Energy Requirement - MU	6629	7544	7904	8329	8782	9253	9748	10255	10866	11204	11537
Annual Load Factor - %	84.81	84.35	83.98	83.56	83.23	82.97	82.67	82.39	82.05	81.73	81.44
<b>Peak Demand - MW</b>	<b>892</b>	<b>1021</b>	<b>1074</b>	<b>1138</b>	<b>1204</b>	<b>1273</b>	<b>1346</b>	<b>1421</b>	<b>1512</b>	<b>1565</b>	<b>1617</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>6848</b>	<b>7794</b>	<b>8165</b>	<b>8605</b>	<b>9072</b>	<b>9559</b>	<b>10070</b>	<b>10594</b>	<b>11225</b>	<b>11575</b>	<b>11919</b>
T&D losses (Ex- Bus) -in %	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	2.70	3.29	3.43	3.56	3.68	3.81	3.96	4.10	4.23	4.48	4.75
Commercial	0.59	0.55	0.55	0.56	0.56	0.56	0.57	0.57	0.58	0.61	0.64
Irrigation	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06
Industrial	96.50	95.96	95.82	95.69	95.56	95.44	95.29	95.14	95.01	94.73	94.43
Others	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

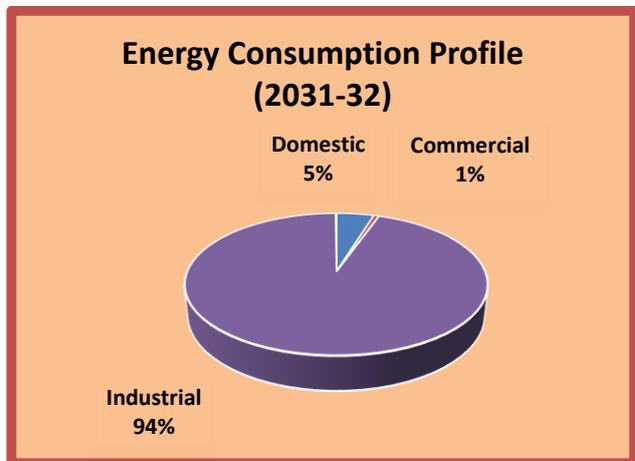
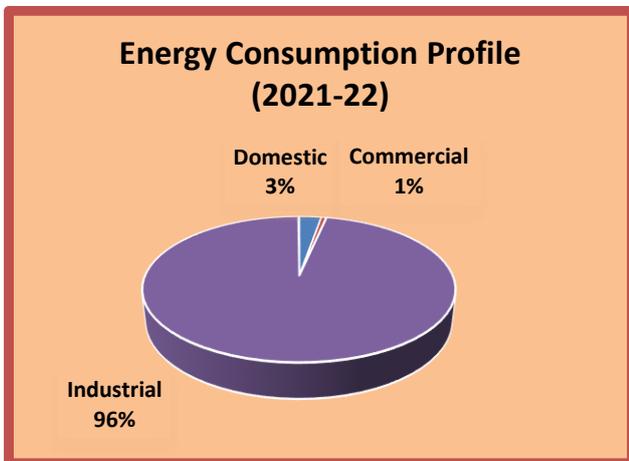


Table 5.31  
**DAMAN & DIU**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	164	191	210	231	253	277	304	333	365	401	437
2. Commercial	49	51	52	54	56	58	60	63	66	69	72
3. Public lighting	7	7	7	7	8	8	8	8	9	9	9
4. Public Water Works	3	3	3	3	3	3	4	4	4	4	4
5. Irrigation	5	5	6	6	7	8	8	9	10	11	12
6. LT Industries	202	231	241	251	261	271	281	290	299	308	316
7. HT Industries	1993	2142	2232	2338	2447	2559	2690	2827	2992	3087	3183
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>2423</b>	<b>2631</b>	<b>2752</b>	<b>2891</b>	<b>3036</b>	<b>3184</b>	<b>3355</b>	<b>3534</b>	<b>3745</b>	<b>3889</b>	<b>4034</b>
T&D losses -MU	109	118	124	130	136	143	151	159	168	175	181
T&D losses -in %	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
Energy Requirement - MU	2532	2749	2875	3021	3172	3327	3506	3693	3913	4064	4216
Annual Load Factor - %	77.52	77.41	77.32	77.22	77.11	77.00	76.87	76.74	76.59	76.43	76.26
<b>Peak Demand - MW</b>	<b>373</b>	<b>405</b>	<b>424</b>	<b>447</b>	<b>470</b>	<b>493</b>	<b>521</b>	<b>549</b>	<b>583</b>	<b>607</b>	<b>631</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>2615</b>	<b>2840</b>	<b>2970</b>	<b>3121</b>	<b>3277</b>	<b>3437</b>	<b>3622</b>	<b>3815</b>	<b>4042</b>	<b>4198</b>	<b>4355</b>
T&D losses (Ex- Bus) -in %	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36	7.36

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	6.78	7.28	7.63	7.99	8.35	8.71	9.07	9.43	9.76	10.30	10.84
Commercial	2.01	1.92	1.90	1.87	1.85	1.82	1.80	1.77	1.75	1.78	1.80
Irrigation	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.29	0.30
Industrial	90.63	90.23	89.89	89.55	89.22	88.87	88.53	88.20	87.88	87.30	86.73
Others	0.39	0.37	0.37	0.37	0.36	0.36	0.35	0.34	0.34	0.33	0.33
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

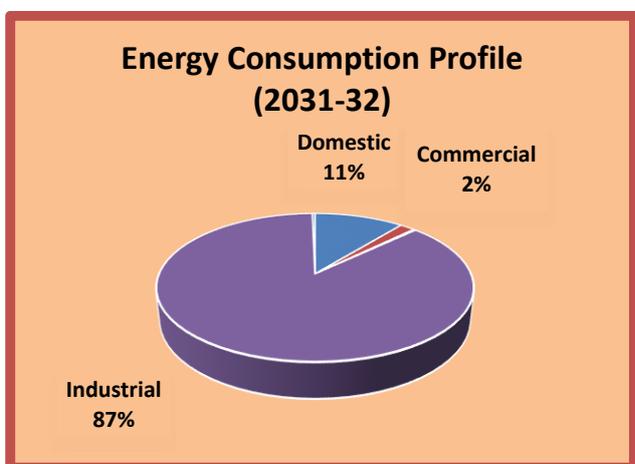
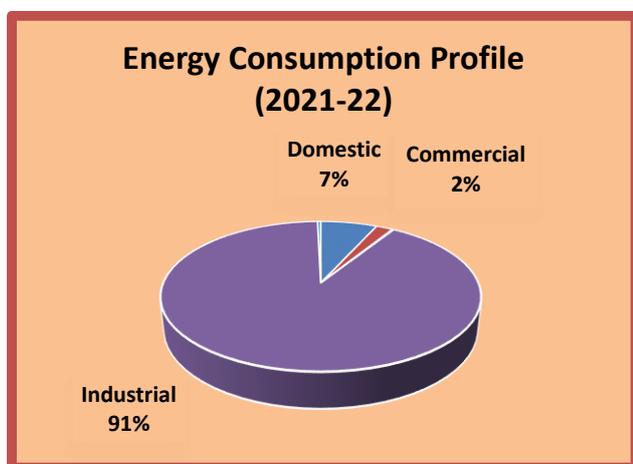


Table 5.32  
**GOA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1308	1386	1466	1551	1642	1738	1840	1952	2077	2218	2359
2. Commercial	531	556	581	608	637	666	699	734	774	821	867
3. Public lighting	30	32	34	36	37	39	41	43	45	47	49
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	33	35	37	39	42	44	46	49	51	54	56
6. LT Industries	83	86	88	90	92	94	95	97	98	99	100
7. HT Industries	1714	1756	1809	1881	1959	2039	2122	2205	2317	2346	2379
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	34	36	37	39	41	43	46	48	50	52	55
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>3733</b>	<b>3886</b>	<b>4053</b>	<b>4244</b>	<b>4449</b>	<b>4664</b>	<b>4889</b>	<b>5128</b>	<b>5412</b>	<b>5637</b>	<b>5867</b>
T&D losses -MU	586	602	619	639	659	679	699	719	743	757	770
T&D losses -in %	13.57	13.42	13.25	13.08	12.90	12.71	12.50	12.29	12.07	11.84	11.60
Energy Requirement - MU	4319	4488	4672	4883	5108	5343	5588	5847	6155	6394	6637
Annual Load Factor - %	70.17	69.25	68.53	68.16	67.90	67.69	67.53	67.46	67.34	67.24	67.17
<b>Peak Demand - MW</b>	<b>703</b>	<b>740</b>	<b>778</b>	<b>818</b>	<b>859</b>	<b>901</b>	<b>945</b>	<b>989</b>	<b>1043</b>	<b>1086</b>	<b>1128</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>4456</b>	<b>4630</b>	<b>4820</b>	<b>5038</b>	<b>5270</b>	<b>5512</b>	<b>5765</b>	<b>6032</b>	<b>6350</b>	<b>6597</b>	<b>6847</b>
T&D losses (Ex- Bus) -in %	16.22	16.08	15.92	15.75	15.58	15.39	15.19	14.98	14.77	14.55	14.32

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	35.03	35.66	36.18	36.55	36.90	37.26	37.64	38.07	38.37	39.35	40.21
Commercial	14.22	14.30	14.35	14.33	14.31	14.29	14.29	14.31	14.30	14.56	14.78
Irrigation	0.89	0.91	0.92	0.93	0.93	0.94	0.95	0.95	0.95	0.95	0.96
Industrial	48.14	47.39	46.80	46.42	46.09	45.74	45.36	44.89	44.62	43.37	42.27
Others	1.72	1.74	1.76	1.76	1.77	1.77	1.77	1.77	1.76	1.76	1.77
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

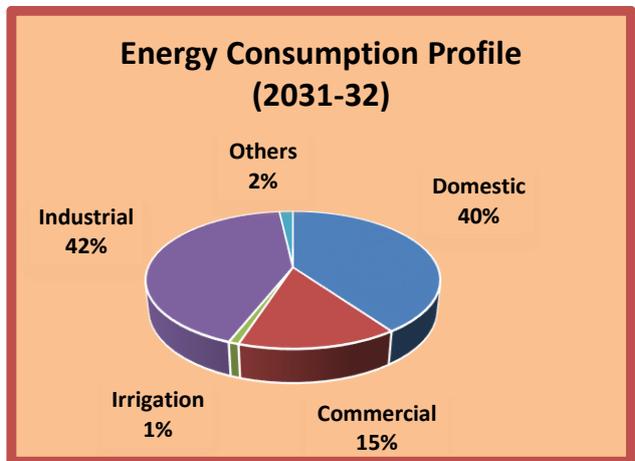
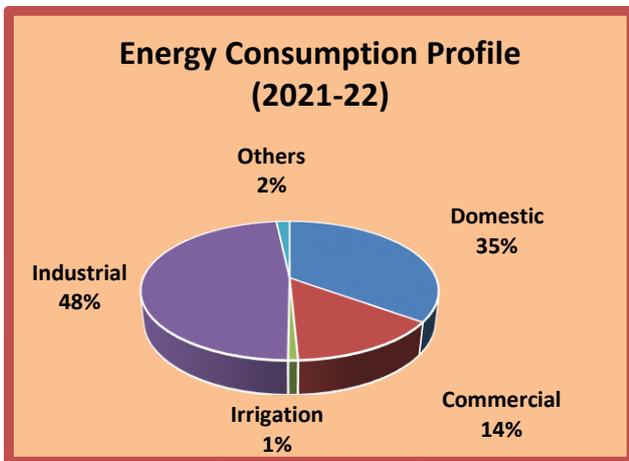


Table 5.33  
**Gujarat - DGVCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	3487	3998	4235	4480	4735	4999	5274	5560	5860	6179	6497
2. Commercial	1138	1354	1491	1639	1800	1975	2165	2371	2595	2840	3098
3. Public lighting	116	123	130	137	145	153	161	169	178	187	196
4. Public Water Works	274	296	319	344	371	400	430	462	496	532	570
5. Irrigation	962	1101	1144	1187	1232	1277	1323	1368	1414	1459	1505
6. LT Industries	4563	5412	5701	5997	6299	6605	6913	7221	7527	7827	8116
7. HT Industries	9425	10555	11258	12353	13577	14870	16248	17665	19648	19961	20247
8. Railway Traction	7	8	8	8	8	8	8	9	9	9	9
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	4259	4686	5041	5417	5817	6240	6688	7161	7660	8187	8742
<b>Total Energy Consumption</b>	<b>24231</b>	<b>27532</b>	<b>29326</b>	<b>31564</b>	<b>33983</b>	<b>36527</b>	<b>39208</b>	<b>41985</b>	<b>45386</b>	<b>47180</b>	<b>48980</b>
T&D losses -MU	2658	2966	3100	3270	3447	3624	3800	3972	4185	4237	4279
T&D losses -in %	9.88	9.73	9.56	9.39	9.21	9.03	8.84	8.64	8.44	8.24	8.03
<b>Energy Requirement - MU</b>	<b>26889</b>	<b>30498</b>	<b>32427</b>	<b>34834</b>	<b>37431</b>	<b>40151</b>	<b>43009</b>	<b>45957</b>	<b>49572</b>	<b>51417</b>	<b>53259</b>
Annual Load Factor - %	72.42	74.15	74.35	74.55	74.75	74.95	75.15	75.35	75.55	75.75	75.95
<b>Peak Demand - MW</b>	<b>4239</b>	<b>4695</b>	<b>4979</b>	<b>5334</b>	<b>5716</b>	<b>6115</b>	<b>6533</b>	<b>6963</b>	<b>7490</b>	<b>7749</b>	<b>8005</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	14.39	14.52	14.44	14.19	13.93	13.69	13.45	13.24	12.91	13.10	13.27
Commercial	4.70	4.92	5.08	5.19	5.30	5.41	5.52	5.65	5.72	6.02	6.32
Irrigation	3.97	4.00	3.90	3.76	3.62	3.50	3.37	3.26	3.11	3.09	3.07
Industrial	57.73	58.00	57.83	58.14	58.49	58.79	59.07	59.27	59.87	58.90	57.91
Others	19.22	18.57	18.75	18.71	18.66	18.62	18.58	18.58	18.38	18.89	19.43
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

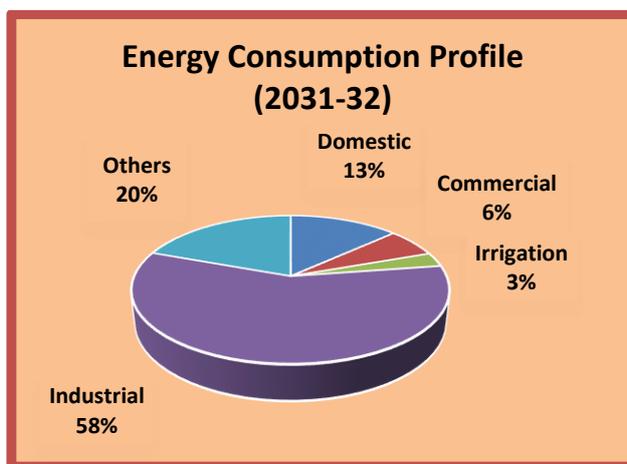
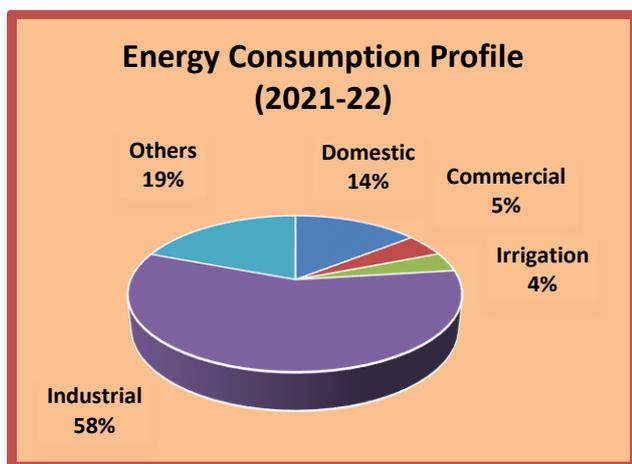


Table 5.34  
**Gujarat - MGVCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	3043	3512	3701	3896	4097	4302	4512	4728	4949	5178	5402
2. Commercial	116	122	129	136	144	153	163	176	192	213	235
3. Public lighting	71	72	73	74	75	76	77	78	79	80	82
4. Public Water Works	362	401	423	445	468	492	516	541	567	593	620
5. Irrigation	1448	1599	1654	1710	1766	1823	1879	1935	1990	2046	2100
6. LT Industries	1617	1783	1854	1925	1995	2065	2132	2198	2260	2318	2371
7. HT Industries	4198	4513	4837	5334	5891	6484	7121	7780	8697	8881	9055
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	117	128	140	153	167	182	199	216	235	255	277
<b>Total Energy Consumption</b>	<b>10971</b>	<b>12130</b>	<b>12812</b>	<b>13673</b>	<b>14602</b>	<b>15576</b>	<b>16599</b>	<b>17652</b>	<b>18969</b>	<b>19565</b>	<b>20142</b>
T&D losses -MU	1792	1943	2010	2099	2190	2281	2370	2455	2567	2573	2572
T&D losses -in %	14.04	13.81	13.56	13.31	13.04	12.77	12.49	12.21	11.92	11.62	11.32
<b>Energy Requirement - MU</b>	<b>12763</b>	<b>14073</b>	<b>14822</b>	<b>15771</b>	<b>16793</b>	<b>17857</b>	<b>18969</b>	<b>20107</b>	<b>21536</b>	<b>22138</b>	<b>22714</b>
Annual Load Factor - %	63.21	64.01	64.31	64.61	64.91	65.21	65.51	65.81	66.11	66.41	66.71
<b>Peak Demand - MW</b>	<b>2305</b>	<b>2510</b>	<b>2631</b>	<b>2786</b>	<b>2953</b>	<b>3126</b>	<b>3305</b>	<b>3488</b>	<b>3719</b>	<b>3805</b>	<b>3887</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	27.74	28.95	28.89	28.50	28.05	27.62	27.18	26.78	26.09	26.47	26.82
Commercial	1.05	1.01	1.00	0.99	0.98	0.98	0.98	1.00	1.01	1.09	1.17
Irrigation	13.20	13.18	12.91	12.51	12.09	11.70	11.32	10.96	10.49	10.46	10.43
Industrial	53.00	51.90	52.23	53.09	54.01	54.89	55.75	56.53	57.76	57.24	56.73
Others	5.01	4.96	4.96	4.91	4.86	4.81	4.77	4.73	4.64	4.74	4.86
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

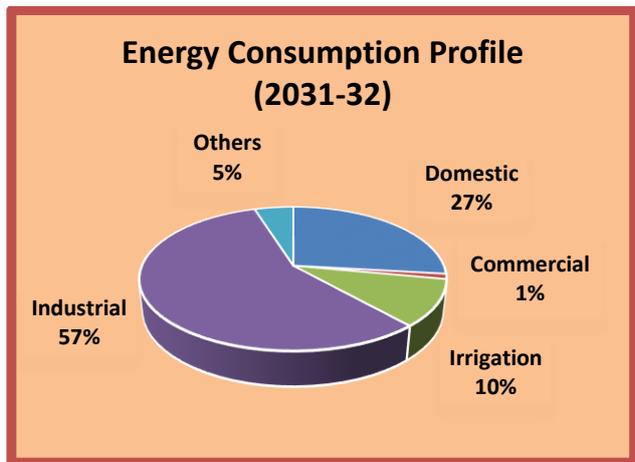
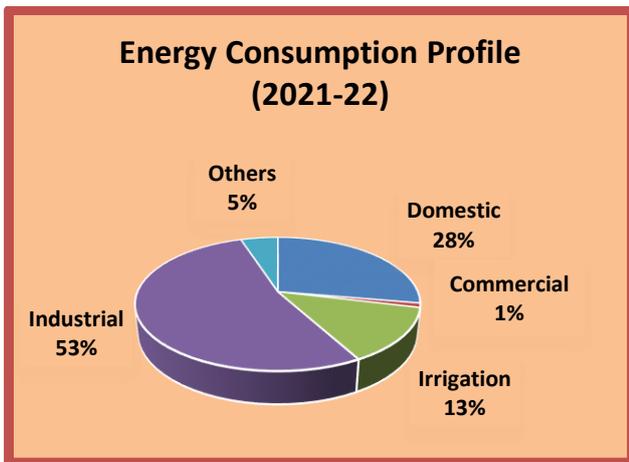


Table 5.35  
**Gujarat - PGVCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	4360	4752	4956	5163	5372	5584	5799	6017	6242	6476	6700
2. Commercial	1470	1758	1863	1971	2084	2201	2322	2448	2580	2719	2857
3. Public lighting	77	78	79	80	81	82	83	83	84	84	85
4. Public Water Works	575	583	591	598	604	611	616	621	625	629	632
5. Irrigation	8095	8666	8947	9228	9509	9798	10079	10358	10634	10906	11175
6. LT Industries	2456	2669	2788	2908	3029	3149	3267	3383	3495	3602	3701
7. HT Industries	14621	16087	17501	19601	21990	24582	27413	30414	34537	35758	36963
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>31654</b>	<b>34594</b>	<b>36725</b>	<b>39549</b>	<b>42669</b>	<b>46005</b>	<b>49578</b>	<b>53324</b>	<b>58197</b>	<b>60175</b>	<b>62114</b>
T&D losses -MU	7750	8415	8864	9460	10102	10768	11458	12154	13066	13292	13482
T&D losses -in %	19.67	19.56	19.44	19.30	19.14	18.97	18.77	18.56	18.33	18.09	17.83
<b>Energy Requirement - MU</b>	<b>39404</b>	<b>43008</b>	<b>45589</b>	<b>49009</b>	<b>52771</b>	<b>56773</b>	<b>61036</b>	<b>65478</b>	<b>71263</b>	<b>73466</b>	<b>75596</b>
Annual Load Factor - %	68.28	68.97	69.10	69.23	69.36	69.49	69.62	69.75	69.88	70.01	70.14
<b>Peak Demand - MW</b>	<b>6587</b>	<b>7119</b>	<b>7532</b>	<b>8081</b>	<b>8685</b>	<b>9327</b>	<b>10008</b>	<b>10717</b>	<b>11642</b>	<b>11979</b>	<b>12304</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	13.77	13.74	13.49	13.05	12.59	12.14	11.70	11.28	10.73	10.76	10.79
Commercial	4.64	5.08	5.07	4.98	4.88	4.78	4.68	4.59	4.43	4.52	4.60
Irrigation	25.57	25.05	24.36	23.33	22.29	21.30	20.33	19.42	18.27	18.12	17.99
Industrial	53.95	54.22	55.25	56.91	58.63	60.28	61.88	63.38	65.35	65.41	65.47
Others	2.06	1.91	1.82	1.71	1.61	1.50	1.41	1.32	1.22	1.19	1.15
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

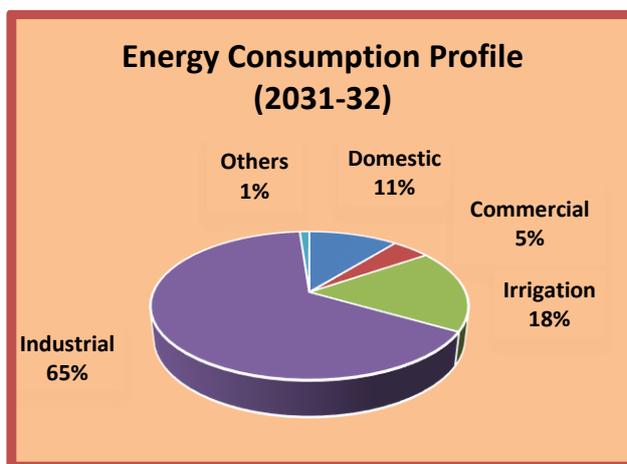
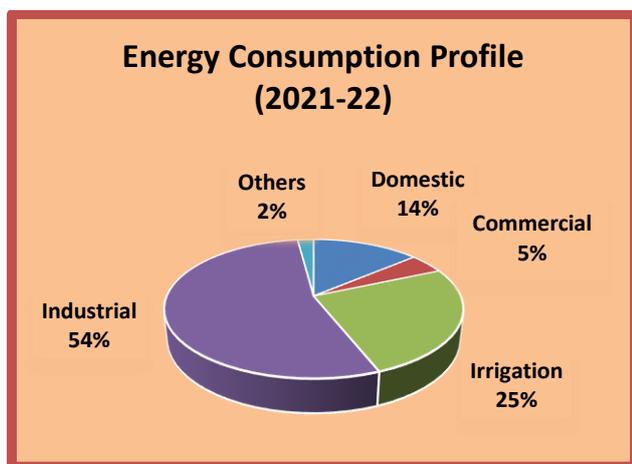


Table 5.36  
**Gujarat - Torrent**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	4072	4423	4584	4750	4924	5108	5310	5538	5807	6138	6459
2. Commercial	1730	1895	1966	2039	2116	2197	2287	2389	2509	2658	2803
3. Public lighting	60	62	63	65	66	67	69	70	71	72	73
4. Public Water Works	178	179	181	182	183	184	184	184	185	185	185
5. Irrigation	5	5	6	6	6	6	6	6	6	6	6
6. LT Industries	2554	2781	2807	2828	2844	2854	2865	2877	2889	2902	2917
7. HT Industries	2550	2854	2989	3158	3339	3524	3715	3907	4147	4227	4298
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	37	38	39	39	40	41	42	43	44	44	45
10. Others	106	113	121	130	139	148	158	168	178	190	201
<b>Total Energy Consumption</b>	<b>11293</b>	<b>12351</b>	<b>12755</b>	<b>13197</b>	<b>13655</b>	<b>14129</b>	<b>14635</b>	<b>15181</b>	<b>15836</b>	<b>16421</b>	<b>16988</b>
T&D losses -MU	587	641	660	680	699	719	739	760	785	806	824
T&D losses -in %	4.95	4.93	4.92	4.90	4.87	4.84	4.81	4.77	4.73	4.68	4.63
<b>Energy Requirement - MU</b>	<b>11880</b>	<b>12992</b>	<b>13415</b>	<b>13876</b>	<b>14354</b>	<b>14848</b>	<b>15375</b>	<b>15941</b>	<b>16622</b>	<b>17227</b>	<b>17812</b>
Annual Load Factor - %	52.07	52.49	52.17	51.85	51.53	51.21	50.89	50.57	50.25	49.93	49.61
<b>Peak Demand - MW</b>	<b>2605</b>	<b>2826</b>	<b>2936</b>	<b>3055</b>	<b>3180</b>	<b>3310</b>	<b>3449</b>	<b>3599</b>	<b>3776</b>	<b>3939</b>	<b>4099</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	36.06	35.81	35.94	36.00	36.06	36.15	36.28	36.48	36.67	37.38	38.02
Commercial	15.32	15.35	15.41	15.45	15.49	15.55	15.63	15.74	15.85	16.18	16.50
Irrigation	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Industrial	45.20	45.63	45.44	45.36	45.28	45.14	44.96	44.68	44.43	43.41	42.47
Others	3.37	3.18	3.17	3.15	3.13	3.11	3.09	3.06	3.02	2.99	2.97
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

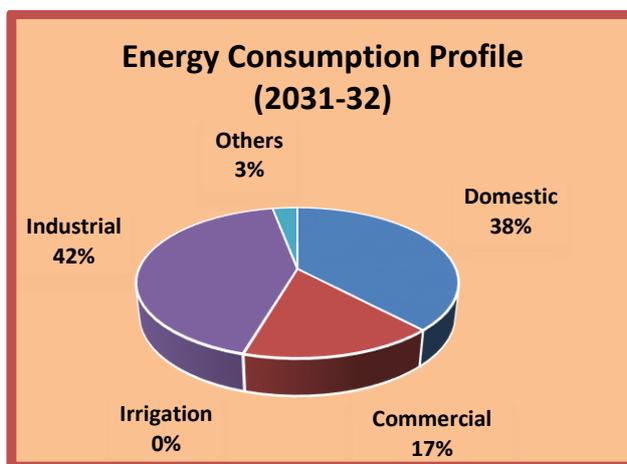
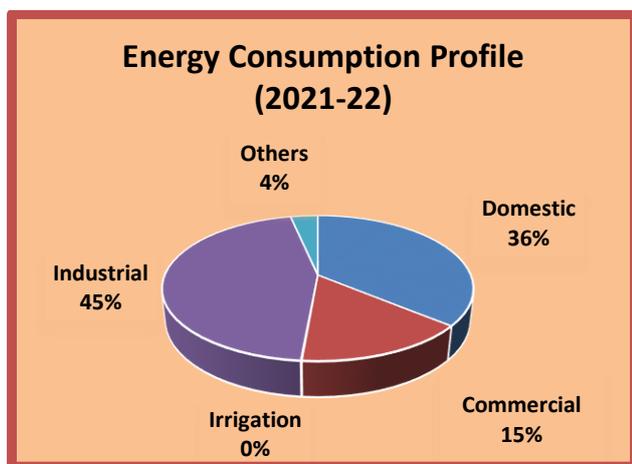


Table 5.37  
**Gujarat - UGVCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	2951	3395	3670	3961	4268	4590	4930	5286	5661	6056	6458
2. Commercial	99	109	119	130	143	157	174	194	219	251	285
3. Public lighting	59	61	62	64	65	66	67	69	70	71	72
4. Public Water Works	928	991	1056	1125	1196	1270	1346	1425	1507	1591	1678
5. Irrigation	10994	12598	13044	13485	13922	14364	14788	15203	15606	15997	16373
6. LT Industries	2147	2379	2522	2668	2816	2966	3117	3268	3416	3560	3698
7. HT Industries	8354	10130	11280	12904	14780	16865	19193	21729	25141	26620	28132
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	975	2029	2140	2253	2369	2488	2608	2731	2855	2981	3107
<b>Total Energy Consumption</b>	<b>26506</b>	<b>31692</b>	<b>33893</b>	<b>36589</b>	<b>39558</b>	<b>42767</b>	<b>46225</b>	<b>49904</b>	<b>54474</b>	<b>57127</b>	<b>59802</b>
T&D losses -MU	3902	4636	4928	5288	5682	6106	6560	7039	7637	7960	8283
T&D losses -in %	12.83	12.76	12.69	12.63	12.56	12.49	12.43	12.36	12.30	12.23	12.17
<b>Energy Requirement - MU</b>	<b>30408</b>	<b>36328</b>	<b>38821</b>	<b>41877</b>	<b>45241</b>	<b>48873</b>	<b>52784</b>	<b>56943</b>	<b>62111</b>	<b>65087</b>	<b>68084</b>
Annual Load Factor - %	68.66	70.55	70.95	71.35	71.75	72.15	72.55	72.95	73.35	73.75	74.15
<b>Peak Demand - MW</b>	<b>5056</b>	<b>5878</b>	<b>6246</b>	<b>6700</b>	<b>7198</b>	<b>7732</b>	<b>8305</b>	<b>8910</b>	<b>9666</b>	<b>10074</b>	<b>10481</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	11.13	10.71	10.83	10.83	10.79	10.73	10.66	10.59	10.39	10.60	10.80
Commercial	0.37	0.34	0.35	0.36	0.36	0.37	0.38	0.39	0.40	0.44	0.48
Irrigation	41.48	39.75	38.48	36.86	35.19	33.59	31.99	30.46	28.65	28.00	27.38
Industrial	39.62	39.47	40.72	42.56	44.48	46.37	48.27	50.09	52.42	52.83	53.23
Others	7.40	9.72	9.61	9.41	9.18	8.94	8.70	8.47	8.14	8.13	8.12
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

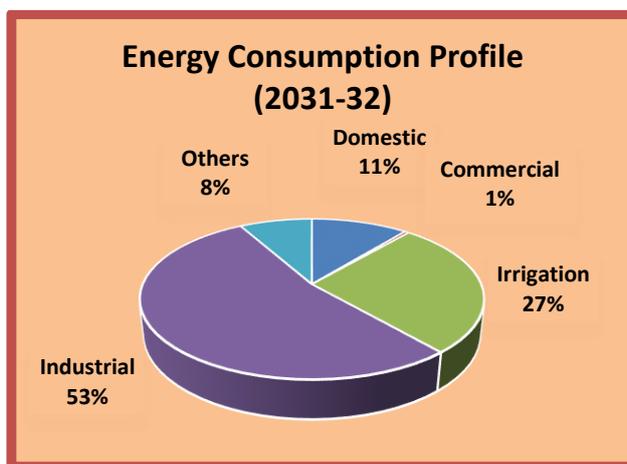
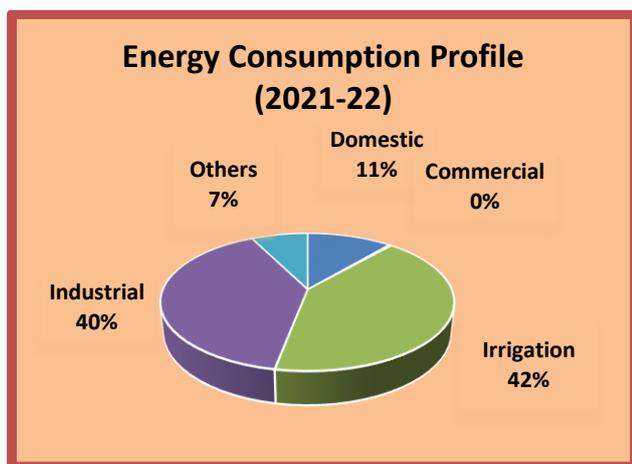


Table 5.38  
**GUJARAT**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	17913	20079	21146	22251	23395	24583	25824	27128	28519	30027	31517
2. Commercial	4553	5238	5567	5915	6286	6683	7111	7579	8096	8681	9278
3. Public lighting	383	395	407	419	432	444	456	469	481	494	507
4. Public Water Works	2316	2450	2570	2694	2822	2955	3092	3233	3379	3530	3684
5. Irrigation	21504	23969	24794	25616	26434	27268	28074	28869	29650	30414	31159
6. LT Industries	13337	15025	15673	16326	16983	17638	18295	18946	19587	20208	20804
7. HT Industries	39147	44139	47866	53349	59576	66325	73690	81495	92169	95447	98694
8. Railway Traction	953	1039	1308	1493	1841	2007	2185	2356	2663	2814	3009
9. Bulk Supply	37	38	39	40	41	41	42	43	44	45	45
10. Others	5886	7386	7871	8383	8921	9487	10081	10705	11358	12042	12757
<b>Total Energy Consumption</b>	<b>106030</b>	<b>119759</b>	<b>127240</b>	<b>136487</b>	<b>146730</b>	<b>157432</b>	<b>168851</b>	<b>180823</b>	<b>195946</b>	<b>203702</b>	<b>211454</b>
T&D losses -MU	16689	18601	19562	20797	22122	23498	24927	26379	28240	28868	29440
T&D losses -in %	13.60	13.44	13.33	13.22	13.10	12.99	12.86	12.73	12.60	12.41	12.22
Energy Requirement - MU	122718	138360	146802	157283	168852	180930	193779	207203	224187	232570	240894
Annual Load Factor - %	72.00	73.29	73.62	73.91	74.27	74.54	74.80	75.05	75.35	75.56	75.78
<b>Peak Demand - MW</b>	<b>19457</b>	<b>21550</b>	<b>22762</b>	<b>24291</b>	<b>25953</b>	<b>27710</b>	<b>29573</b>	<b>31515</b>	<b>33964</b>	<b>35137</b>	<b>36287</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>123788</b>	<b>139566</b>	<b>148082</b>	<b>158654</b>	<b>170323</b>	<b>182507</b>	<b>195467</b>	<b>209008</b>	<b>226141</b>	<b>234597</b>	<b>242993</b>
T&D losses (Ex- Bus) -in %	14.35	14.19	14.07	13.97	13.85	13.74	13.62	13.49	13.35	13.17	12.98

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	16.89	16.77	16.62	16.30	15.94	15.62	15.29	15.00	14.55	14.74	14.90
Commercial	4.29	4.37	4.38	4.33	4.28	4.25	4.21	4.19	4.13	4.26	4.39
Irrigation	20.28	20.01	19.49	18.77	18.02	17.32	16.63	15.97	15.13	14.93	14.74
Industrial	49.50	49.40	49.94	51.05	52.18	53.33	54.48	55.55	57.03	56.78	56.51
Others	9.03	9.44	9.58	9.55	9.58	9.49	9.39	9.29	9.15	9.29	9.46
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

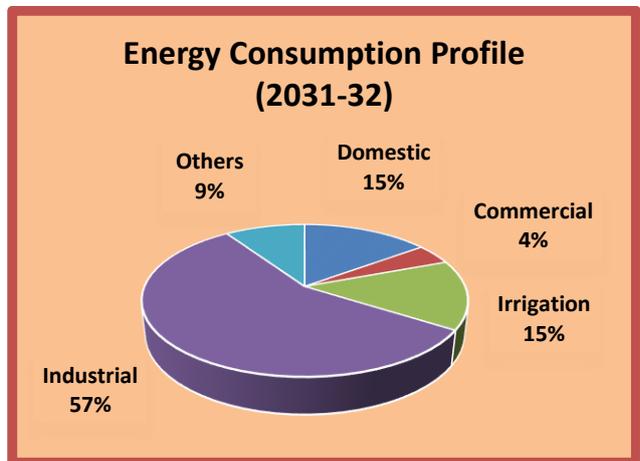
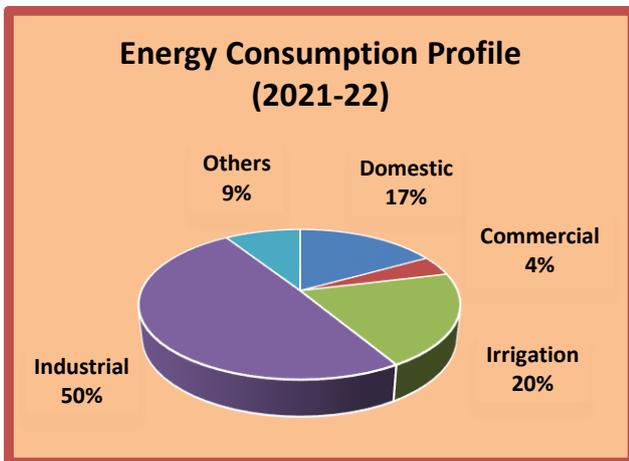


Table 5.39  
**Madhya Pradesh - Central Zone**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	5868	6598	7070	7566	8084	8624	9187	9771	10377	11003	11578
2. Commercial	1502	1594	1689	1788	1891	1998	2109	2226	2350	2482	2595
3. Public lighting	119	140	146	153	159	166	173	179	186	193	199
4. Public Water Works	567	724	783	846	913	983	1058	1137	1219	1306	1398
5. Irrigation	8692	10447	10991	11550	12124	12917	13563	14220	14887	15562	16244
6. LT Industries	310	337	355	374	392	410	428	445	459	471	479
7. HT Industries	3405	3867	4290	4961	5739	6594	7538	8543	9959	10270	10532
8. Railway Traction	847	870	893	915	936	1556	1587	1616	1643	1669	1692
9. Bulk Supply	158	163	167	172	176	180	183	187	190	193	196
10. Others	158	367	387	407	428	450	471	494	516	539	562
<b>Total Energy Consumption</b>	<b>21626</b>	<b>25106</b>	<b>26772</b>	<b>28730</b>	<b>30842</b>	<b>33878</b>	<b>36297</b>	<b>38817</b>	<b>41787</b>	<b>43689</b>	<b>45475</b>
T&D losses -MU	8507	9421	9569	9768	9959	10375	10529	10651	10831	10683	10477
T&D losses -in %	28.23	27.29	26.33	25.37	24.41	23.45	22.48	21.53	20.58	19.65	18.73
<b>Energy Requirement - MU</b>	<b>30133</b>	<b>34527</b>	<b>36341</b>	<b>38498</b>	<b>40801</b>	<b>44253</b>	<b>46826</b>	<b>49468</b>	<b>52618</b>	<b>54372</b>	<b>55951</b>
Annual Load Factor - %	60.44	64.66	65.18	65.70	66.22	66.74	67.26	67.78	68.30	68.82	69.34
<b>Peak Demand - MW</b>	<b>5692</b>	<b>6096</b>	<b>6365</b>	<b>6689</b>	<b>7034</b>	<b>7569</b>	<b>7947</b>	<b>8331</b>	<b>8794</b>	<b>9019</b>	<b>9211</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	27.14	26.28	26.41	26.33	26.21	25.46	25.31	25.17	24.83	25.18	25.46
Commercial	6.95	6.35	6.31	6.22	6.13	5.90	5.81	5.73	5.62	5.68	5.71
Irrigation	40.19	41.61	41.05	40.20	39.31	38.13	37.37	36.63	35.63	35.62	35.72
Industrial	17.18	16.74	17.35	18.57	19.88	20.68	21.95	23.15	24.93	24.59	24.21
Others	8.55	9.02	8.87	8.67	8.47	9.84	9.57	9.31	8.99	8.93	8.90
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

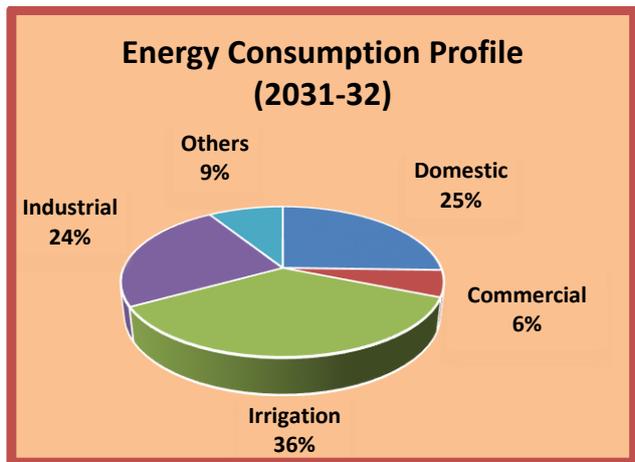
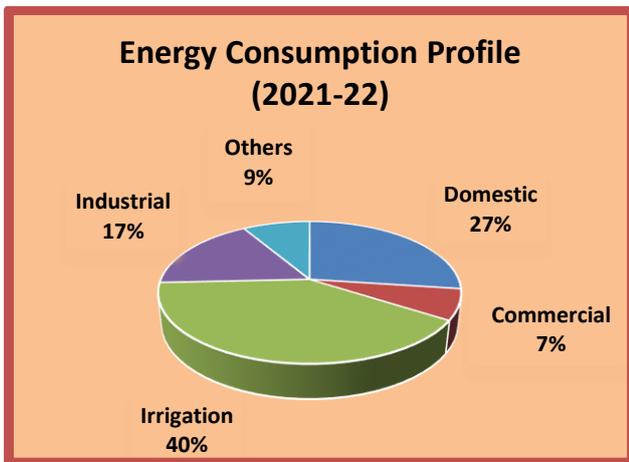


Table 5.40  
**Madhya Pradesh - Eastern Zone**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	5811	6661	7285	7958	8685	9468	10311	11216	12185	13223	14237
2. Commercial	1422	1732	1865	2006	2157	2319	2494	2683	2890	3119	3339
3. Public lighting	138	163	169	176	182	189	195	202	208	215	222
4. Public Water Works	360	417	448	481	516	552	591	632	676	721	769
5. Irrigation	6533	7280	7554	7833	8119	8567	8895	9226	9559	9895	10231
6. LT Industries	401	535	581	630	682	736	794	853	913	973	1031
7. HT Industries	2977	3349	3648	4135	4685	5272	5900	6547	7457	7768	8047
8. Railway Traction	574	605	637	670	704	739	775	813	851	890	930
9. Bulk Supply	261	267	272	278	283	288	293	297	302	306	310
10. Others	142	550	579	609	640	672	705	739	774	809	846
<b>Total Energy Consumption</b>	<b>18618</b>	<b>21559</b>	<b>23037</b>	<b>24775</b>	<b>26653</b>	<b>28803</b>	<b>30953</b>	<b>33207</b>	<b>35814</b>	<b>37919</b>	<b>39963</b>
T&D losses -MU	6722	7429	7571	7759	7948	8172	8349	8508	8711	8748	8738
T&D losses -in %	26.53	25.63	24.74	23.85	22.97	22.10	21.24	20.40	19.56	18.74	17.94
<b>Energy Requirement - MU</b>	<b>25340</b>	<b>28988</b>	<b>30608</b>	<b>32534</b>	<b>34601</b>	<b>36976</b>	<b>39302</b>	<b>41715</b>	<b>44525</b>	<b>46667</b>	<b>48701</b>
Annual Load Factor - %	65.03	69.02	69.24	69.46	69.68	69.90	70.12	70.34	70.56	70.78	71.00
<b>Peak Demand - MW</b>	<b>4448</b>	<b>4795</b>	<b>5047</b>	<b>5347</b>	<b>5669</b>	<b>6039</b>	<b>6399</b>	<b>6770</b>	<b>7204</b>	<b>7527</b>	<b>7830</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	31.21	30.90	31.62	32.12	32.59	32.87	33.31	33.78	34.02	34.87	35.63
Commercial	7.64	8.04	8.09	8.10	8.09	8.05	8.06	8.08	8.07	8.23	8.36
Irrigation	35.09	33.77	32.79	31.62	30.46	29.74	28.74	27.78	26.69	26.09	25.60
Industrial	18.14	18.02	18.36	19.23	20.14	20.86	21.63	22.28	23.37	23.05	22.72
Others	7.92	9.28	9.14	8.93	8.72	8.47	8.27	8.08	7.85	7.76	7.70
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

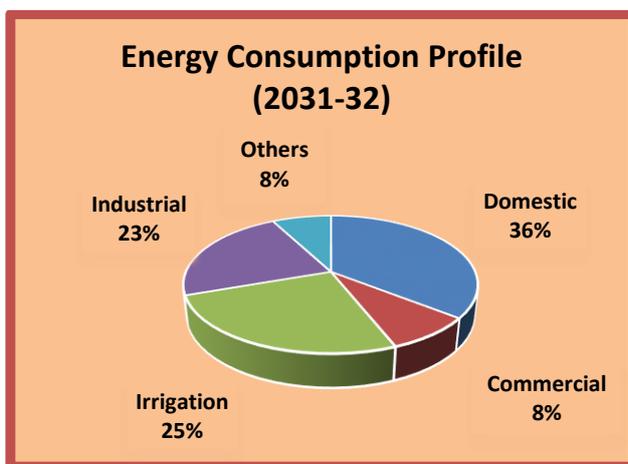
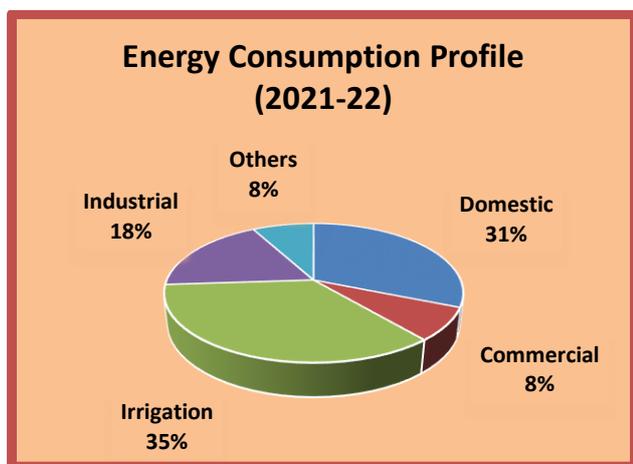


Table 5.41  
**Madhya Pradesh Western Zone**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	5838	6762	7244	7751	8282	8839	9420	10027	10660	11319	11923
2. Commercial	1528	1843	1979	2123	2275	2436	2606	2786	2978	3184	3371
3. Public lighting	164	194	205	216	228	240	253	265	278	292	305
4. Public Water Works	941	1091	1193	1303	1422	1550	1687	1834	1992	2161	2341
5. Irrigation	10968	12108	12700	13311	13941	14843	15559	16287	17028	17780	18541
6. LT Industries	673	709	745	781	817	852	887	918	946	968	981
7. HT Industries	4233	4835	5344	6165	7116	8157	9301	10514	12235	12862	13425
8. Railway Traction	435	442	449	456	462	1167	1180	1191	1200	1208	1215
9. Bulk Supply	28	30	32	33	35	37	38	40	42	44	46
10. Others	606	940	990	1042	1096	1151	1207	1264	1322	1381	1441
<b>Total Energy Consumption</b>	<b>25415</b>	<b>28953</b>	<b>30881</b>	<b>33181</b>	<b>35673</b>	<b>39271</b>	<b>42137</b>	<b>45127</b>	<b>48682</b>	<b>51199</b>	<b>53589</b>
T&D losses -MU	4110	4655	4929	5249	5585	6076	6433	6788	7204	7443	7641
T&D losses -in %	13.92	13.85	13.76	13.66	13.54	13.40	13.24	13.08	12.89	12.69	12.48
<b>Energy Requirement - MU</b>	<b>29525</b>	<b>33608</b>	<b>35809</b>	<b>38430</b>	<b>41258</b>	<b>45347</b>	<b>48570</b>	<b>51915</b>	<b>55886</b>	<b>58641</b>	<b>61230</b>
Annual Load Factor - %	52.61	56.71	57.23	57.75	58.27	58.79	59.31	59.83	60.35	60.87	61.39
<b>Peak Demand - MW</b>	<b>6407</b>	<b>6765</b>	<b>7142</b>	<b>7596</b>	<b>8082</b>	<b>8805</b>	<b>9348</b>	<b>9905</b>	<b>10571</b>	<b>10997</b>	<b>11385</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	22.97	23.35	23.46	23.36	23.22	22.51	22.36	22.22	21.90	22.11	22.25
Commercial	6.01	6.36	6.41	6.40	6.38	6.20	6.18	6.17	6.12	6.22	6.29
Irrigation	43.15	41.82	41.13	40.12	39.08	37.80	36.92	36.09	34.98	34.73	34.60
Industrial	19.31	19.15	19.72	20.93	22.24	22.94	24.18	25.33	27.08	27.01	26.88
Others	8.56	9.31	9.29	9.19	9.09	10.55	10.36	10.18	9.93	9.93	9.98
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

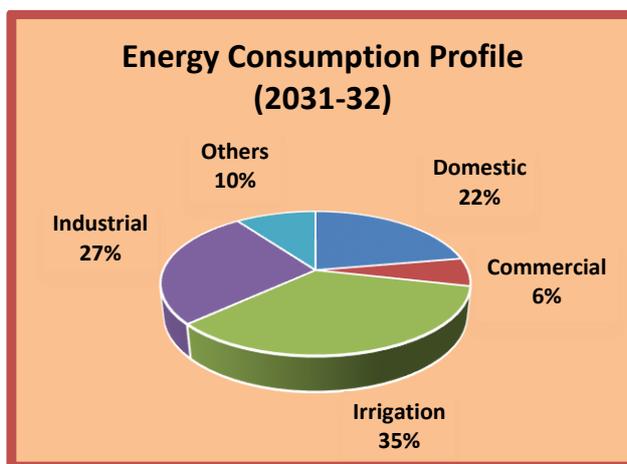
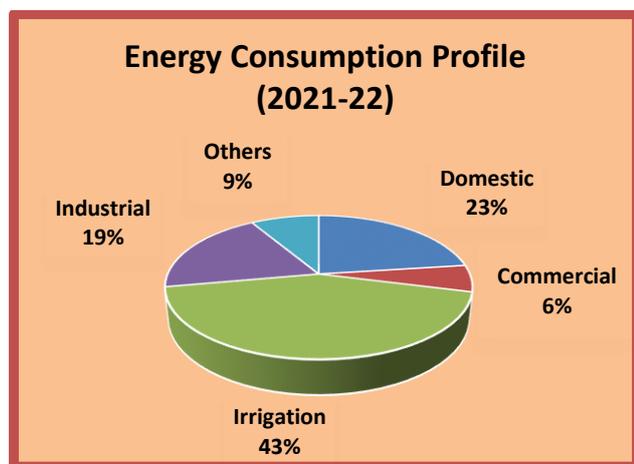


Table 5.42  
**MADHYA PRADESH**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	17517	20021	21599	23274	25051	26931	28918	31014	33222	35545	37738
2. Commercial	4452	5169	5533	5917	6323	6753	7209	7695	8218	8786	9306
3. Public lighting	421	497	521	545	570	595	620	646	673	699	726
4. Public Water Works	1867	2231	2424	2630	2850	3086	3336	3603	3887	4188	4508
5. Irrigation	26193	29835	31244	32694	34184	36328	38017	39733	41474	43237	45017
6. LT Industries	1384	1581	1681	1785	1891	1999	2108	2216	2319	2412	2491
7. HT Industries	10615	12051	13283	15261	17541	20023	22740	25604	29652	30900	32004
8. Railway Traction	1855	1917	1979	2040	2101	3462	3542	3619	3694	3767	3837
9. Bulk Supply	448	459	471	482	493	504	514	524	534	543	552
10. Others	906	1856	1956	2059	2164	2272	2383	2496	2612	2729	2849
<b>Total Energy Consumption</b>	<b>65659</b>	<b>75617</b>	<b>80690</b>	<b>86686</b>	<b>93168</b>	<b>101952</b>	<b>109387</b>	<b>117151</b>	<b>126284</b>	<b>132807</b>	<b>139026</b>
T&D losses -MU	19339	21506	22070	22776	23492	24624	25311	25947	26745	26873	26856
T&D losses -in %	22.75	22.14	21.48	20.81	20.14	19.45	18.79	18.13	17.48	16.83	16.19
Energy Requirement - MU	84998	97123	102759	109463	116661	126576	134698	143098	153029	159680	165882
Annual Load Factor - %	60.87	65.18	65.63	66.07	66.51	66.92	67.36	67.81	68.25	68.70	69.15
<b>Peak Demand - MW</b>	<b>15941</b>	<b>17009</b>	<b>17874</b>	<b>18914</b>	<b>20024</b>	<b>21592</b>	<b>22826</b>	<b>24091</b>	<b>25596</b>	<b>26534</b>	<b>27386</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>86521</b>	<b>98863</b>	<b>104600</b>	<b>111424</b>	<b>118751</b>	<b>128844</b>	<b>137111</b>	<b>145662</b>	<b>155770</b>	<b>162540</b>	<b>168854</b>
T&D losses (Ex- Bus) -in %	24.11	23.51	22.86	22.20	21.54	20.87	20.22	19.57	18.93	18.29	17.66

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.68	26.48	26.77	26.85	26.89	26.42	26.44	26.47	26.31	26.76	27.14
Commercial	6.78	6.84	6.86	6.83	6.79	6.62	6.59	6.57	6.51	6.62	6.69
Irrigation	39.89	39.46	38.72	37.72	36.69	35.63	34.75	33.92	32.84	32.56	32.38
Industrial	18.27	18.03	18.54	19.66	20.86	21.60	22.72	23.75	25.32	25.08	24.81
Others	8.37	9.21	9.11	8.95	8.78	9.73	9.50	9.30	9.03	8.98	8.97
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

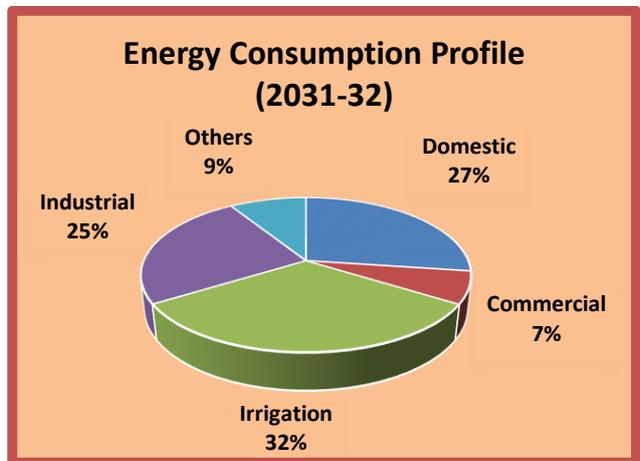
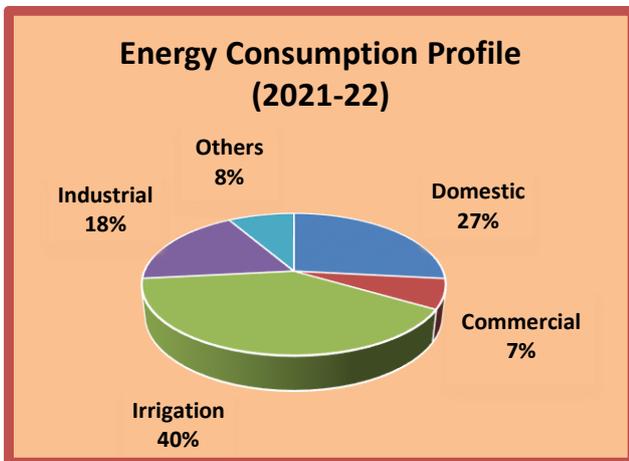


Table 5.43  
**Maharashtra - Adani**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	6010	6284	6464	6647	6837	7039	7257	7503	7790	8141	8485
2. Commercial	3680	3796	3913	4032	4155	4282	4417	4564	4729	4921	5111
3. Public lighting	0	0	0	0	0	0	0	0	0	0	0
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	569	596	604	610	616	621	625	629	631	634	637
7. HT Industries	300	391	434	484	540	600	665	736	818	890	968
8. Railway Traction	31	31	111	211	212	312	312	313	313	313	314
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	280	284	288	291	294	297	300	302	304	306	308
<b>Total Energy Consumption</b>	<b>10869</b>	<b>11383</b>	<b>11814</b>	<b>12277</b>	<b>12654</b>	<b>13151</b>	<b>13577</b>	<b>14046</b>	<b>14584</b>	<b>15205</b>	<b>15823</b>
T&D losses -MU	1259	1313	1358	1406	1444	1496	1539	1586	1641	1704	1767
T&D losses -in %	10.38	10.35	10.31	10.28	10.24	10.21	10.18	10.15	10.11	10.08	10.05
<b>Energy Requirement - MU</b>	<b>12128</b>	<b>12696</b>	<b>13172</b>	<b>13683</b>	<b>14098</b>	<b>14647</b>	<b>15116</b>	<b>15632</b>	<b>16225</b>	<b>16910</b>	<b>17590</b>
Annual Load Factor - %	64.93	64.30	63.72	63.19	62.73	62.35	62.10	61.91	61.79	61.68	61.54
<b>Peak Demand - MW</b>	<b>2132</b>	<b>2254</b>	<b>2360</b>	<b>2472</b>	<b>2566</b>	<b>2682</b>	<b>2779</b>	<b>2882</b>	<b>2998</b>	<b>3130</b>	<b>3263</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	55.29	55.21	54.72	54.15	54.03	53.52	53.45	53.41	53.41	53.54	53.63
Commercial	33.86	33.35	33.12	32.85	32.83	32.56	32.53	32.49	32.42	32.36	32.30
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	7.99	8.68	8.78	8.92	9.13	9.28	9.51	9.72	9.93	10.02	10.15
Others	2.86	2.76	3.38	4.09	4.00	4.63	4.51	4.38	4.23	4.07	3.93
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

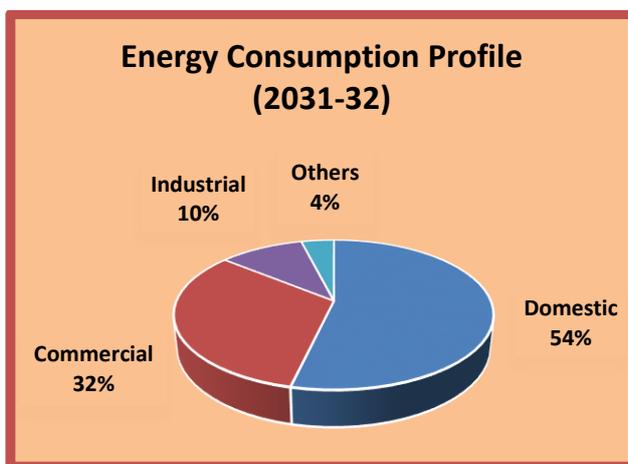
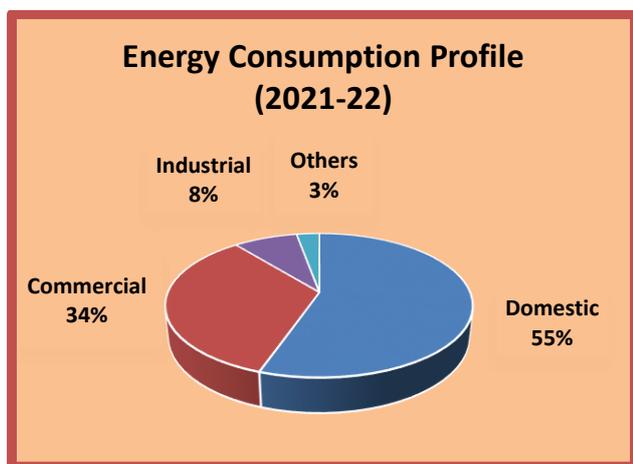


Table 5.44  
**Maharashtra - BEST**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	2105	2155	2204	2253	2302	2353	2408	2469	2541	2631	2708
2. Commercial	2104	2120	2134	2145	2154	2161	2166	2171	2177	2183	2186
3. Public lighting	16	17	17	17	17	17	17	18	18	18	18
4. Public Water Works	46	47	48	49	49	50	51	51	52	53	53
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	137	135	133	131	129	127	124	120	117	112	108
7. HT Industries	152	155	159	165	172	178	184	190	196	202	207
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>4561</b>	<b>4629</b>	<b>4695</b>	<b>4760</b>	<b>4824</b>	<b>4886</b>	<b>4950</b>	<b>5019</b>	<b>5101</b>	<b>5199</b>	<b>5279</b>
T&D losses -MU	389	395	400	405	410	415	420	425	431	439	445
T&D losses -in %	7.87	7.86	7.85	7.84	7.83	7.82	7.81	7.80	7.80	7.79	7.78
<b>Energy Requirement - MU</b>	<b>4950</b>	<b>5024</b>	<b>5095</b>	<b>5165</b>	<b>5233</b>	<b>5301</b>	<b>5370</b>	<b>5444</b>	<b>5532</b>	<b>5638</b>	<b>5724</b>
Annual Load Factor - %	60.28	60.21	60.14	60.06	59.96	59.85	59.74	59.63	59.52	59.34	59.20
<b>Peak Demand - MW</b>	<b>937</b>	<b>953</b>	<b>967</b>	<b>982</b>	<b>996</b>	<b>1011</b>	<b>1026</b>	<b>1042</b>	<b>1061</b>	<b>1085</b>	<b>1104</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	46.16	46.55	46.94	47.33	47.73	48.17	48.65	49.19	49.82	50.61	51.29
Commercial	46.14	45.81	45.45	45.06	44.65	44.22	43.76	43.25	42.68	41.98	41.40
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	6.33	6.27	6.23	6.23	6.24	6.23	6.21	6.18	6.13	6.05	5.96
Others	1.37	1.37	1.38	1.38	1.38	1.38	1.38	1.38	1.37	1.36	1.35
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

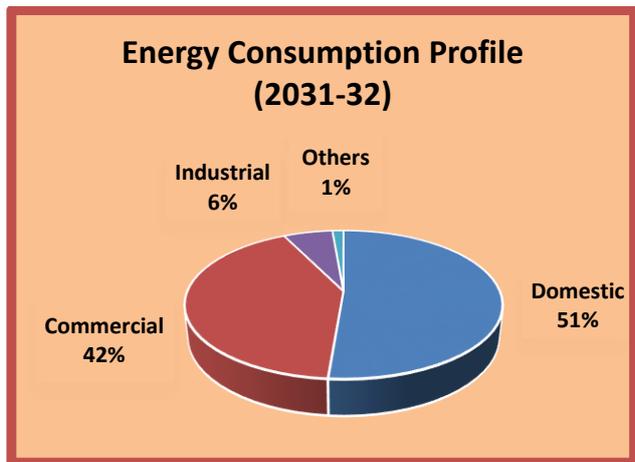
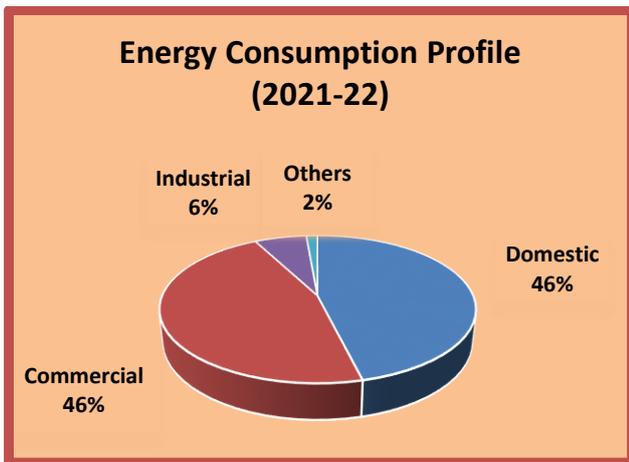


Table 5.45  
**Maharashtra - MSEDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	22898	24426	25498	26592	27713	28869	30076	31360	32766	34368	35844
2. Commercial	8228	8672	9028	9392	9768	10162	10581	11041	11564	12186	12775
3. Public lighting	2031	2089	2146	2202	2258	2313	2367	2420	2472	2522	2571
4. Public Water Works	2877	2960	3043	3125	3206	3287	3365	3443	3519	3593	3664
5. Irrigation	33879	36264	37518	38794	40086	42184	43668	45158	46650	48142	49630
6. LT Industries	5808	6508	6723	6934	7138	7333	7515	7681	7825	7941	8021
7. HT Industries	33129	35435	37331	40170	43350	46729	50345	54074	59307	60207	60932
8. Railway Traction	80	82	84	86	88	90	91	93	94	96	97
9. Bulk Supply	6809	7109	7414	7726	8043	8364	8690	9021	9354	9691	10030
10. Others	4414	5046	5191	5336	5479	5621	5761	5898	6033	6165	6293
<b>Total Energy Consumption</b>	<b>120153</b>	<b>128590</b>	<b>133976</b>	<b>140356</b>	<b>147129</b>	<b>154952</b>	<b>162460</b>	<b>170188</b>	<b>179584</b>	<b>184910</b>	<b>189859</b>
T&D losses -MU	24755	26049	26653	27390	28132	28996	29720	30402	31291	31391	31370
T&D losses -in %	17.08	16.84	16.59	16.33	16.05	15.76	15.46	15.16	14.84	14.51	14.18
<b>Energy Requirement - MU</b>	<b>144907</b>	<b>154639</b>	<b>160629</b>	<b>167746</b>	<b>175261</b>	<b>183949</b>	<b>192180</b>	<b>200590</b>	<b>210874</b>	<b>216301</b>	<b>221229</b>
Annual Load Factor - %	67.34	66.47	66.12	65.77	65.42	65.07	64.72	64.37	64.02	63.67	63.32
<b>Peak Demand - MW</b>	<b>24566</b>	<b>26558</b>	<b>27732</b>	<b>29115</b>	<b>30582</b>	<b>32271</b>	<b>33897</b>	<b>35573</b>	<b>37601</b>	<b>38781</b>	<b>39884</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	19.06	19.00	19.03	18.95	18.84	18.63	18.51	18.43	18.25	18.59	18.88
Commercial	6.85	6.74	6.74	6.69	6.64	6.56	6.51	6.49	6.44	6.59	6.73
Irrigation	28.20	28.20	28.00	27.64	27.25	27.22	26.88	26.53	25.98	26.04	26.14
Industrial	32.41	32.62	32.88	33.56	34.32	34.89	35.61	36.29	37.38	36.85	36.32
Others	13.49	13.44	13.34	13.16	12.96	12.70	12.48	12.27	11.96	11.93	11.93
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

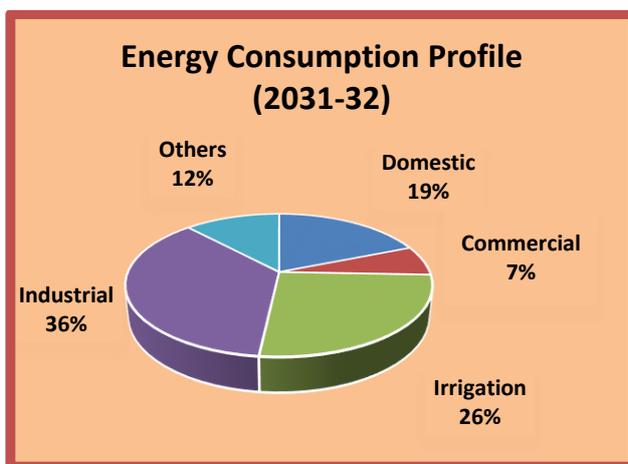
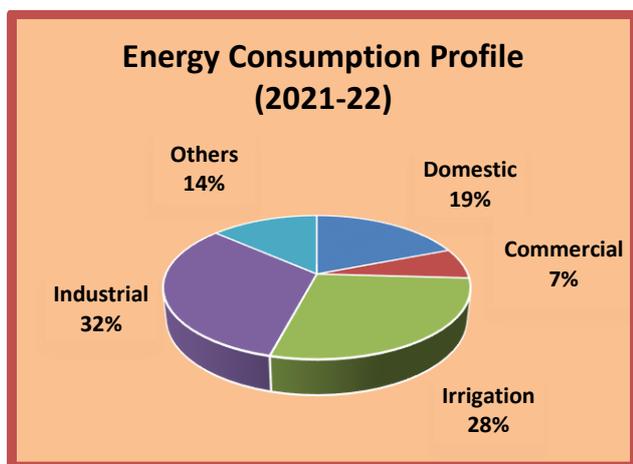


Table 5.46  
**Maharashtra - TATA Power**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1970	1996	2020	2043	2065	2087	2110	2137	2170	2214	2246
2. Commercial	1186	1201	1216	1229	1242	1254	1266	1279	1293	1312	1324
3. Public lighting	0	0	0	0	0	0	0	0	0	0	0
4. Public Water Works	241	244	248	251	253	256	258	260	262	264	265
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	238	241	244	247	249	251	253	255	256	257	257
7. HT Industries	976	1052	1076	1111	1149	1185	1222	1255	1303	1306	1308
8. Railway Traction	73	74	75	76	77	77	78	79	79	80	80
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	590	610	630	651	671	691	711	731	750	770	789
<b>Total Energy Consumption</b>	<b>5274</b>	<b>5419</b>	<b>5509</b>	<b>5607</b>	<b>5706</b>	<b>5802</b>	<b>5898</b>	<b>5995</b>	<b>6113</b>	<b>6202</b>	<b>6269</b>
T&D losses -MU	229	235	239	243	247	251	255	258	263	267	269
T&D losses -in %	4.16	4.16	4.15	4.15	4.15	4.14	4.14	4.13	4.13	4.13	4.12
<b>Energy Requirement - MU</b>	<b>5503</b>	<b>5654</b>	<b>5747</b>	<b>5850</b>	<b>5952</b>	<b>6053</b>	<b>6153</b>	<b>6253</b>	<b>6376</b>	<b>6469</b>	<b>6539</b>
Annual Load Factor - %	70.07	69.96	69.85	69.74	69.61	69.49	69.35	69.19	69.06	68.92	68.77
<b>Peak Demand - MW</b>	<b>897</b>	<b>923</b>	<b>939</b>	<b>958</b>	<b>976</b>	<b>994</b>	<b>1013</b>	<b>1032</b>	<b>1054</b>	<b>1072</b>	<b>1085</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	37.36	36.84	36.68	36.44	36.20	35.97	35.78	35.64	35.49	35.70	35.83
Commercial	22.49	22.17	22.07	21.92	21.77	21.61	21.46	21.33	21.16	21.15	21.13
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	23.02	23.86	23.96	24.22	24.50	24.76	25.01	25.18	25.49	25.20	24.95
Others	17.14	17.13	17.30	17.42	17.54	17.65	17.75	17.84	17.86	17.95	18.09
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

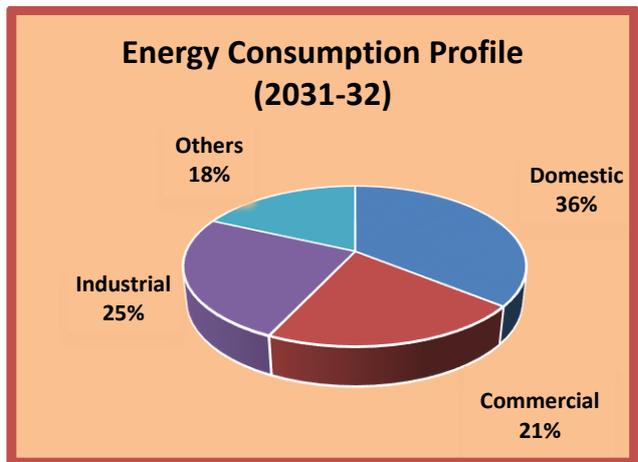
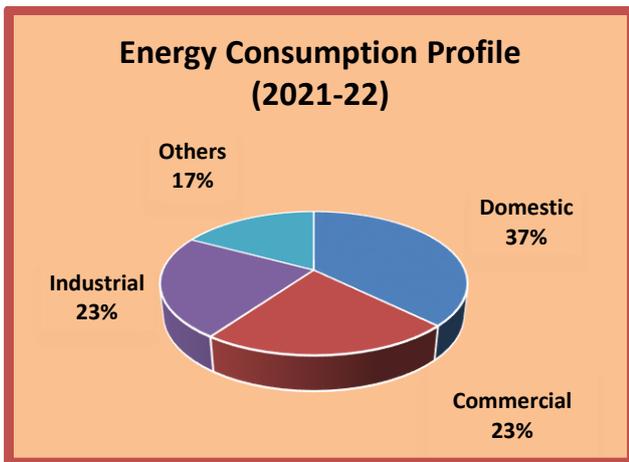


Table 5.47  
**MAHARASHTRA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	32984	34861	36186	37535	38918	40349	41851	43469	45267	47354	49284
2. Commercial	15199	15790	16291	16799	17319	17859	18431	19055	19763	20601	21396
3. Public lighting	2047	2105	2163	2219	2275	2330	2385	2438	2490	2540	2589
4. Public Water Works	3164	3252	3338	3424	3509	3593	3674	3755	3833	3909	3983
5. Irrigation	33879	36264	37518	38794	40086	42184	43668	45158	46650	48142	49630
6. LT Industries	6751	7480	7704	7922	8132	8332	8517	8684	8828	8944	9022
7. HT Industries	34556	37033	39001	41931	45210	48693	52416	56255	61624	62606	63415
8. Railway Traction	3744	4069	5165	5967	7277	8007	8677	9323	10481	11053	11491
9. Bulk Supply	6809	7109	7414	7726	8043	8364	8690	9021	9354	9691	10030
10. Others	5284	5940	6109	6278	6444	6609	6771	6931	7088	7241	7390
<b>Total Energy Consumption</b>	<b>144417</b>	<b>153903</b>	<b>160888</b>	<b>168594</b>	<b>177214</b>	<b>186319</b>	<b>195081</b>	<b>204087</b>	<b>215376</b>	<b>222080</b>	<b>228230</b>
T&D losses -MU	26632	27992	28650	29444	30233	31157	31933	32671	33626	33802	33852
T&D losses -in %	15.57	15.39	15.12	14.87	14.57	14.33	14.07	13.80	13.50	13.21	12.92
Energy Requirement - MU	171049	181895	189538	198038	207447	217476	227014	236758	249002	255882	262082
Annual Load Factor - %	69.53	68.75	68.70	68.51	68.51	68.25	68.01	67.75	67.61	67.35	67.05
<b>Peak Demand - MW</b>	<b>28083</b>	<b>30203</b>	<b>31495</b>	<b>32999</b>	<b>34567</b>	<b>36376</b>	<b>38105</b>	<b>39891</b>	<b>42042</b>	<b>43373</b>	<b>44622</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>172818</b>	<b>183777</b>	<b>191499</b>	<b>200087</b>	<b>209593</b>	<b>219726</b>	<b>229362</b>	<b>239207</b>	<b>251578</b>	<b>258529</b>	<b>264793</b>
T&D losses (Ex- Bus) -in %	16.43	16.26	15.98	15.74	15.45	15.20	14.95	14.68	14.39	14.10	13.81

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	22.84	22.65	22.49	22.26	21.96	21.66	21.45	21.30	21.02	21.32	21.59
Commercial	10.52	10.26	10.13	9.96	9.77	9.59	9.45	9.34	9.18	9.28	9.37
Irrigation	23.46	23.56	23.32	23.01	22.62	22.64	22.38	22.13	21.66	21.68	21.75
Industrial	28.60	28.92	29.03	29.57	30.10	30.61	31.23	31.82	32.71	32.22	31.74
Others	14.57	14.60	15.03	15.19	15.55	15.51	15.48	15.42	15.44	15.51	15.55
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

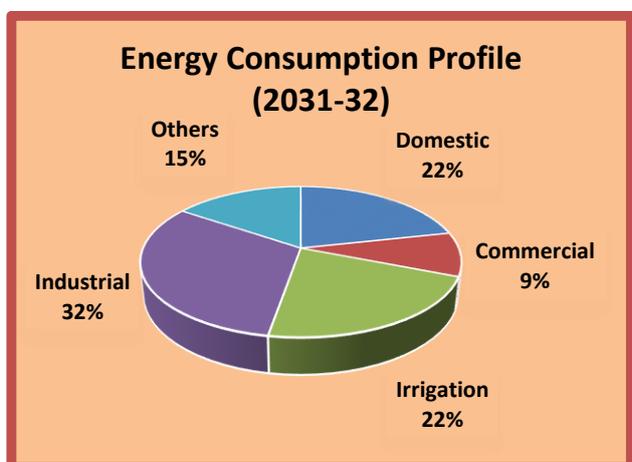
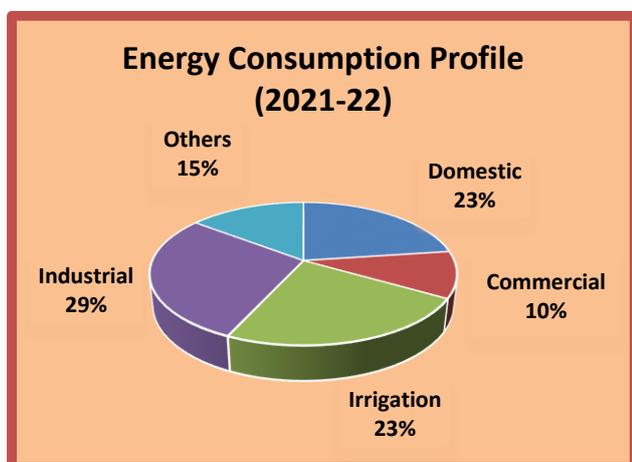


Table 5.48  
**Andhra Pradesh - APCPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	5908	6304	6719	7153	7608	8083	8580	9099	9642	10211	10763
2. Commercial	1295	1370	1449	1532	1618	1709	1805	1908	2019	2141	2259
3. Public lighting	86	90	93	97	101	105	109	113	117	121	125
4. Public Water Works	152	160	169	177	187	196	206	216	227	237	248
5. Irrigation	3277	3485	3704	3934	4175	4468	4742	5027	5324	5633	5955
6. LT Industries	518	546	574	604	634	664	694	724	752	779	803
7. HT Industries	2672	2796	2975	3243	3539	3848	4173	4502	4950	5070	5176
8. Railway Traction	268	275	282	288	295	301	307	313	319	324	329
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	787	829	873	918	965	1013	1063	1114	1166	1220	1275
<b>Total Energy Consumption</b>	<b>14961</b>	<b>15854</b>	<b>16838</b>	<b>17947</b>	<b>19121</b>	<b>20388</b>	<b>21679</b>	<b>23015</b>	<b>24515</b>	<b>25737</b>	<b>26933</b>
T&D losses -MU	1787	1857	1932	2015	2098	2184	2265	2343	2428	2479	2519
T&D losses -in %	10.67	10.48	10.29	10.09	9.89	9.68	9.46	9.24	9.01	8.78	8.55
<b>Energy Requirement - MU</b>	<b>16748</b>	<b>17711</b>	<b>18770</b>	<b>19962</b>	<b>21219</b>	<b>22572</b>	<b>23944</b>	<b>25358</b>	<b>26944</b>	<b>28216</b>	<b>29452</b>
Annual Load Factor - %	64.63	64.37	64.25	64.13	64.01	63.89	63.77	63.65	63.53	63.41	63.29
<b>Peak Demand - MW</b>	<b>2958</b>	<b>3141</b>	<b>3335</b>	<b>3553</b>	<b>3784</b>	<b>4033</b>	<b>4286</b>	<b>4548</b>	<b>4841</b>	<b>5079</b>	<b>5312</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	39.49	39.76	39.90	39.86	39.79	39.65	39.58	39.53	39.33	39.67	39.96
Commercial	8.65	8.64	8.61	8.53	8.46	8.38	8.33	8.29	8.24	8.32	8.39
Irrigation	21.90	21.98	22.00	21.92	21.83	21.92	21.87	21.84	21.72	21.89	22.11
Industrial	21.32	21.08	21.08	21.44	21.82	22.13	22.45	22.70	23.26	22.73	22.20
Others	8.64	8.54	8.41	8.25	8.09	7.92	7.77	7.63	7.46	7.39	7.34
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

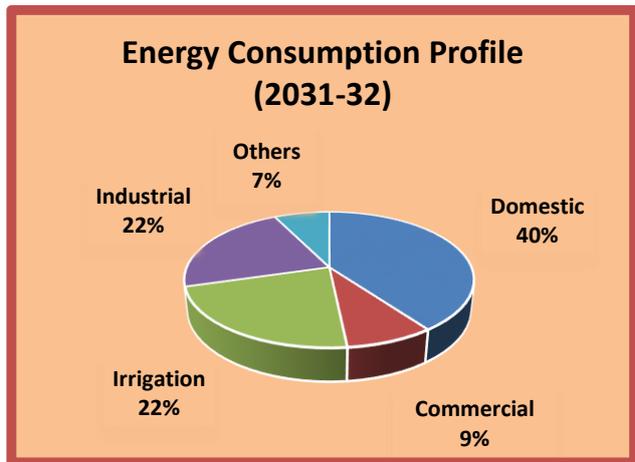
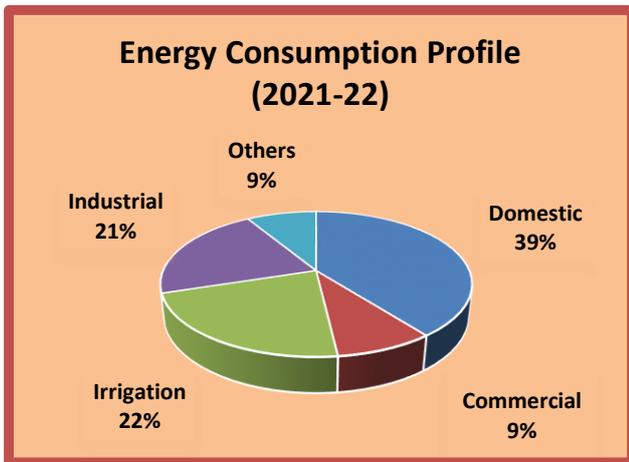
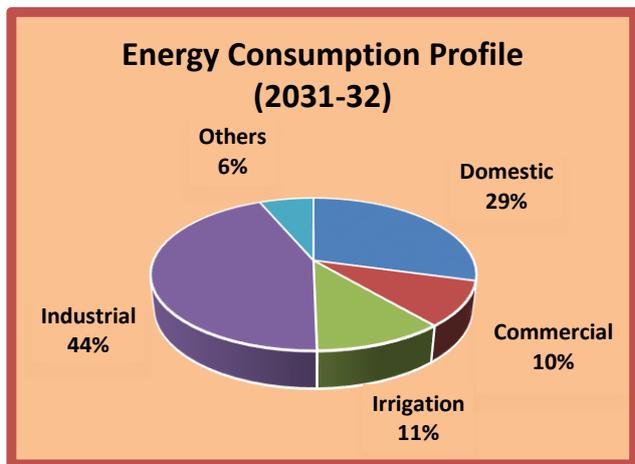
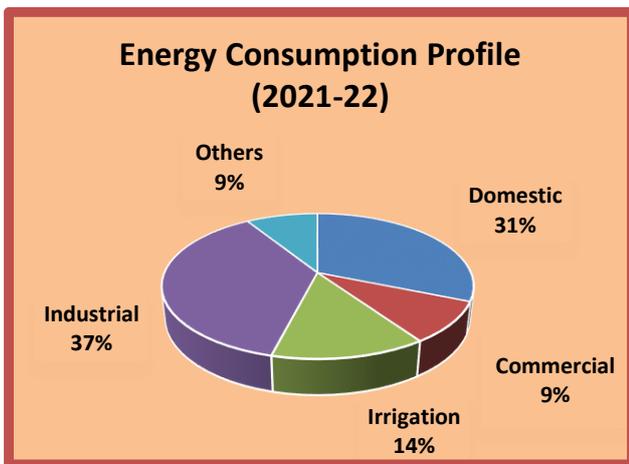


Table 5.49  
**Andhra Pradesh - APEPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	6916	7514	8154	8840	9575	10360	11199	12097	13059	14094	15136
2. Commercial	2025	2221	2433	2663	2914	3185	3481	3803	4155	4544	4943
3. Public lighting	106	110	115	120	125	130	135	140	145	150	156
4. Public Water Works	200	210	221	231	242	253	264	276	288	300	312
5. Irrigation	2994	3197	3412	3638	3877	4165	4438	4724	5023	5336	5664
6. LT Industries	437	463	489	517	545	573	602	630	658	685	709
7. HT Industries	7782	8482	9393	10642	12071	13646	15388	17268	19734	20874	22016
8. Railway Traction	760	803	847	894	942	991	1042	1095	1149	1205	1263
9. Bulk Supply	253	268	283	299	316	333	351	369	388	407	428
10. Others	642	684	728	774	822	873	925	980	1038	1097	1159
<b>Total Energy Consumption</b>	<b>22115</b>	<b>23951</b>	<b>26075</b>	<b>28619</b>	<b>31427</b>	<b>34509</b>	<b>37825</b>	<b>41382</b>	<b>45638</b>	<b>48693</b>	<b>51784</b>
T&D losses -MU	2734	3001	3309	3673	4075	4515	4989	5496	6096	6535	6974
T&D losses -in %	11.00	11.14	11.26	11.37	11.48	11.57	11.65	11.72	11.78	11.83	11.87
<b>Energy Requirement - MU</b>	<b>24849</b>	<b>26952</b>	<b>29384</b>	<b>32292</b>	<b>35502</b>	<b>39024</b>	<b>42814</b>	<b>46878</b>	<b>51734</b>	<b>55228</b>	<b>58758</b>
Annual Load Factor - %	71.01	71.91	72.61	73.31	74.01	74.71	75.41	76.11	76.81	77.51	78.21
<b>Peak Demand - MW</b>	<b>3994</b>	<b>4279</b>	<b>4620</b>	<b>5028</b>	<b>5476</b>	<b>5963</b>	<b>6481</b>	<b>7031</b>	<b>7689</b>	<b>8134</b>	<b>8576</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	31.27	31.37	31.27	30.89	30.47	30.02	29.61	29.23	28.61	28.94	29.23
Commercial	9.16	9.27	9.33	9.31	9.27	9.23	9.20	9.19	9.10	9.33	9.55
Irrigation	13.54	13.35	13.09	12.71	12.34	12.07	11.73	11.41	11.01	10.96	10.94
Industrial	37.16	37.34	37.90	38.99	40.14	41.20	42.27	43.25	44.68	44.27	43.88
Others	8.87	8.66	8.41	8.10	7.78	7.48	7.18	6.91	6.59	6.49	6.41
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table 5.50**  
**Andhra Pradesh - APSPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	5477	6041	6656	7326	8055	8847	9707	10640	11652	12750	13880
2. Commercial	1451	1518	1586	1657	1730	1808	1890	1980	2081	2200	2317
3. Public lighting	111	115	119	123	127	131	135	139	142	146	150
4. Public Water Works	610	681	760	848	945	1052	1170	1300	1443	1601	1774
5. Irrigation	7595	7742	7886	8026	8162	8374	8515	8650	8778	8900	9013
6. LT Industries	550	579	609	640	671	702	733	764	793	820	844
7. HT Industries	6519	6889	7403	8148	8977	9855	10791	11756	13050	13371	13659
8. Railway Traction	652	690	730	771	814	859	904	952	1001	1052	1104
9. Bulk Supply	454	462	470	478	485	492	498	504	510	515	520
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>23419</b>	<b>24718</b>	<b>26220</b>	<b>28017</b>	<b>29967</b>	<b>32119</b>	<b>34344</b>	<b>36684</b>	<b>39451</b>	<b>41355</b>	<b>43261</b>
T&D losses -MU	2908	3032	3174	3343	3520	3711	3898	4086	4307	4421	4523
T&D losses -in %	11.05	10.93	10.80	10.66	10.51	10.36	10.19	10.02	9.84	9.66	9.47
<b>Energy Requirement - MU</b>	<b>26327</b>	<b>27750</b>	<b>29394</b>	<b>31360</b>	<b>33487</b>	<b>35830</b>	<b>38242</b>	<b>40769</b>	<b>43758</b>	<b>45775</b>	<b>47785</b>
Annual Load Factor - %	57.15	56.88	56.73	56.59	56.44	56.30	56.15	56.01	55.86	55.72	55.57
<b>Peak Demand - MW</b>	<b>5258</b>	<b>5570</b>	<b>5915</b>	<b>6326</b>	<b>6773</b>	<b>7265</b>	<b>7774</b>	<b>8310</b>	<b>8942</b>	<b>9379</b>	<b>9816</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	23.39	24.44	25.39	26.15	26.88	27.55	28.26	29.00	29.53	30.83	32.09
Commercial	6.20	6.14	6.05	5.91	5.77	5.63	5.50	5.40	5.28	5.32	5.35
Irrigation	32.43	31.32	30.08	28.65	27.24	26.07	24.79	23.58	22.25	21.52	20.83
Industrial	30.18	30.22	30.56	31.37	32.20	32.87	33.56	34.13	35.09	34.32	33.52
Others	7.80	7.88	7.93	7.92	7.91	7.89	7.88	7.89	7.85	8.01	8.20
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

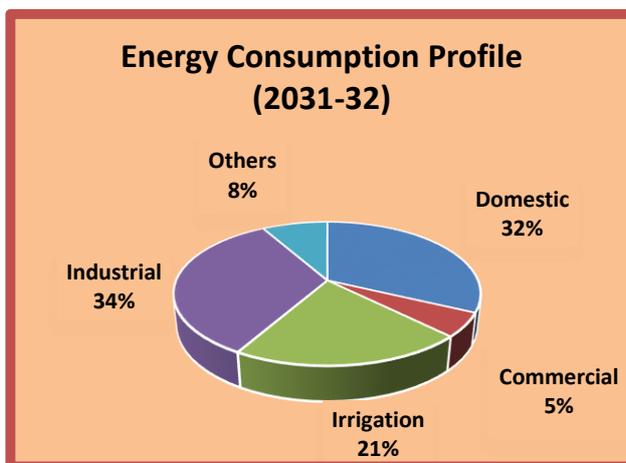
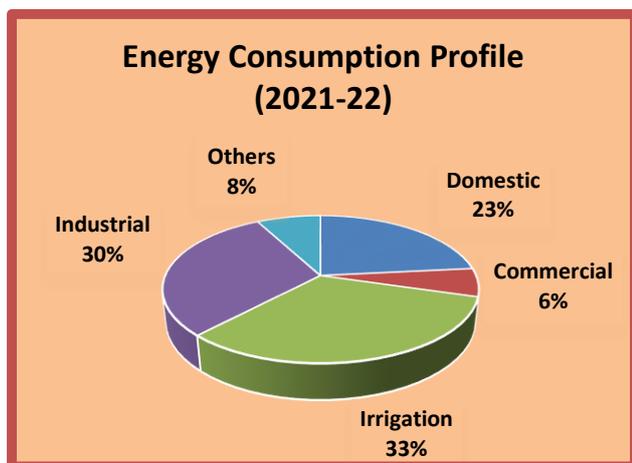


Table 5.51  
**ANDHRA PRADESH**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	18301	19858	21529	23320	25238	27290	29486	31836	34352	37055	39779
2. Commercial	4771	5109	5468	5852	6262	6702	7176	7690	8255	8885	9518
3. Public lighting	303	315	328	340	353	366	379	392	405	418	431
4. Public Water Works	962	1051	1149	1257	1373	1501	1640	1792	1957	2138	2334
5. Irrigation	13866	14425	15002	15598	16214	17007	17694	18400	19125	19869	20632
6. LT Industries	1504	1588	1673	1761	1850	1939	2029	2118	2203	2283	2356
7. HT Industries	16973	18167	19771	22033	24587	27349	30352	33525	37735	39316	40851
8. Railway Traction	1680	1768	1859	1953	2050	2151	2254	2360	2469	2581	2696
9. Bulk Supply	707	730	753	777	801	825	849	873	898	923	948
10. Others	1428	1513	1601	1692	1787	1886	1988	2094	2204	2317	2434
<b>Total Energy Consumption</b>	<b>60495</b>	<b>64523</b>	<b>69133</b>	<b>74583</b>	<b>80515</b>	<b>87016</b>	<b>93847</b>	<b>101081</b>	<b>109604</b>	<b>115785</b>	<b>121978</b>
T&D losses -MU	7429	7891	8414	9030	9693	10410	11152	11924	12832	13434	14016
T&D losses -in %	10.94	10.90	10.85	10.80	10.74	10.68	10.62	10.55	10.48	10.40	10.31
Energy Requirement - MU	67924	72414	77548	83613	90207	97426	104999	113005	122436	129219	135995
Annual Load Factor - %	61.72	61.86	62.04	62.23	62.43	62.63	62.84	63.05	63.27	63.47	63.66
<b>Peak Demand - MW</b>	<b>12563</b>	<b>13363</b>	<b>14269</b>	<b>15337</b>	<b>16495</b>	<b>17758</b>	<b>19076</b>	<b>20461</b>	<b>22091</b>	<b>23243</b>	<b>24387</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>68438</b>	<b>72961</b>	<b>78134</b>	<b>84245</b>	<b>90889</b>	<b>98162</b>	<b>105792</b>	<b>113859</b>	<b>123361</b>	<b>130196</b>	<b>137022</b>
T&D losses (Ex- Bus) -in %	11.61	11.56	11.52	11.47	11.41	11.35	11.29	11.22	11.15	11.07	10.98

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	30.25	30.78	31.14	31.27	31.35	31.36	31.42	31.50	31.34	32.00	32.61
Commercial	7.89	7.92	7.91	7.85	7.78	7.70	7.65	7.61	7.53	7.67	7.80
Irrigation	22.92	22.36	21.70	20.91	20.14	19.54	18.85	18.20	17.45	17.16	16.91
Industrial	30.54	30.62	31.02	31.90	32.83	33.66	34.50	35.26	36.44	35.93	35.42
Others	8.40	8.33	8.23	8.07	7.90	7.73	7.58	7.43	7.24	7.23	7.25
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

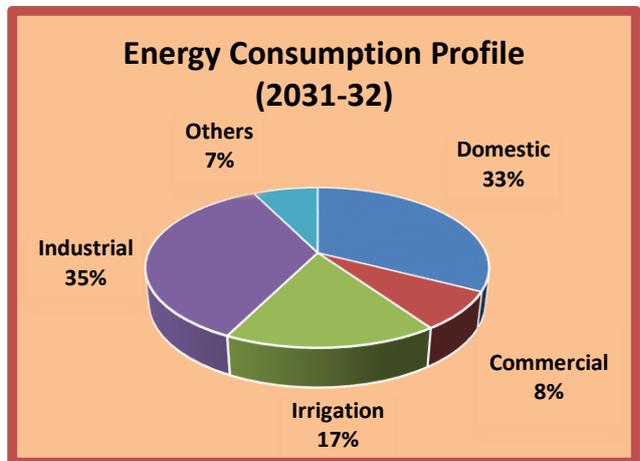
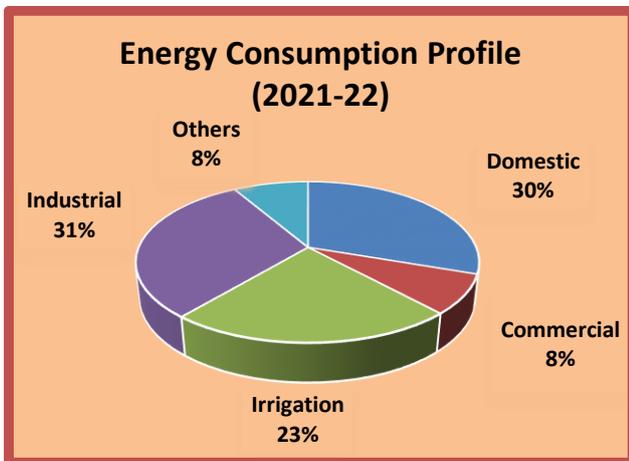


Table 5.52  
**Karnataka - BESCO**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	7628	7942	8259	8578	8897	9216	9535	9856	10181	10516	10792
2. Commercial	3193	3264	3333	3401	3467	3532	3598	3667	3742	3829	3902
3. Public lighting	513	535	557	580	603	626	650	673	697	721	745
4. Public Water Works	2089	2239	2397	2564	2741	2926	3122	3327	3542	3768	4004
5. Irrigation	6002	6132	6262	6393	6523	6974	7170	7363	7553	7739	7920
6. LT Industries	1032	1063	1091	1114	1130	1137	1146	1159	1174	1192	1213
7. HT Industries	3479	3501	3618	3906	4252	4627	5037	5454	6108	6212	6313
8. Railway Traction	4	4	4	4	5	5	5	5	6	6	6
9. Bulk Supply	4648	4778	4907	5035	5161	5285	5407	5526	5642	5756	5865
10. Others	1728	1789	1851	1913	1975	2038	2100	2162	2224	2285	2346
<b>Total Energy Consumption</b>	<b>30314</b>	<b>31248</b>	<b>32281</b>	<b>33489</b>	<b>34754</b>	<b>36366</b>	<b>37770</b>	<b>39193</b>	<b>40868</b>	<b>42024</b>	<b>43105</b>
T&D losses -MU	4681	4733	4790	4863	4934	5041	5107	5163	5240	5239	5219
T&D losses -in %	13.38	13.15	12.92	12.68	12.43	12.17	11.91	11.64	11.36	11.08	10.80
<b>Energy Requirement - MU</b>	<b>34996</b>	<b>35980</b>	<b>37071</b>	<b>38352</b>	<b>39688</b>	<b>41407</b>	<b>42877</b>	<b>44356</b>	<b>46108</b>	<b>47262</b>	<b>48324</b>
Annual Load Factor - %	60.81	63.11	63.00	62.89	62.78	62.67	62.56	62.45	62.34	62.23	62.12
<b>Peak Demand - MW</b>	<b>6570</b>	<b>6508</b>	<b>6717</b>	<b>6961</b>	<b>7217</b>	<b>7542</b>	<b>7824</b>	<b>8108</b>	<b>8443</b>	<b>8670</b>	<b>8880</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	25.16	25.42	25.59	25.61	25.60	25.34	25.25	25.15	24.91	25.02	25.04
Commercial	10.53	10.45	10.33	10.16	9.98	9.71	9.53	9.36	9.16	9.11	9.05
Irrigation	19.80	19.62	19.40	19.09	18.77	19.18	18.98	18.79	18.48	18.41	18.37
Industrial	14.88	14.61	14.59	14.99	15.49	15.85	16.37	16.87	17.82	17.62	17.46
Others	29.63	29.91	30.10	30.15	30.17	29.92	29.87	29.84	29.64	29.83	30.08
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

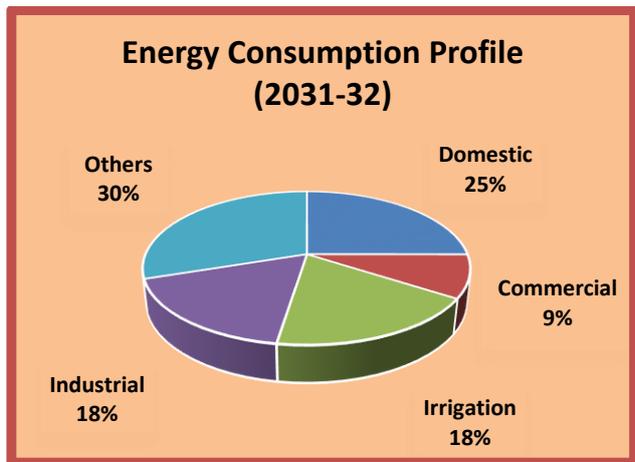
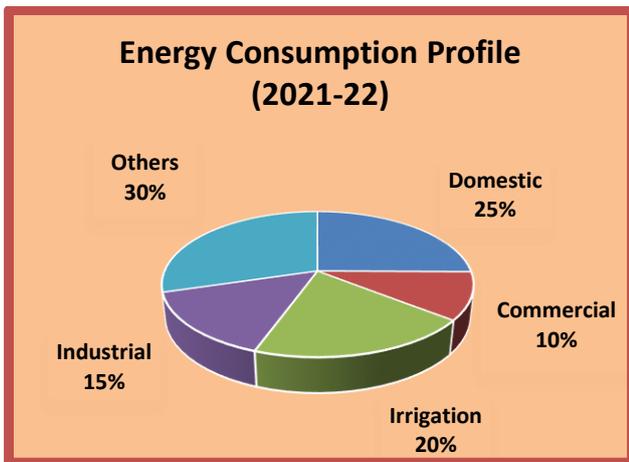


Table 5.53  
**Karnataka - Chamundeshwari Electricity Supply Corporation**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1260	1329	1399	1472	1549	1630	1717	1816	1930	2070	2204
2. Commercial	468	504	542	583	626	672	722	777	839	913	983
3. Public lighting	120	127	134	142	149	157	165	173	181	189	198
4. Public Water Works	776	822	870	919	970	1022	1075	1130	1185	1242	1299
5. Irrigation	3250	3438	3633	3835	4045	4388	4642	4903	5171	5444	5723
6. LT Industries	155	158	162	164	167	168	171	174	176	178	180
7. HT Industries	575	579	599	644	696	748	809	871	965	981	998
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	530	538	546	553	559	565	570	574	577	579	581
<b>Total Energy Consumption</b>	<b>7135</b>	<b>7496</b>	<b>7885</b>	<b>8313</b>	<b>8759</b>	<b>9350</b>	<b>9871</b>	<b>10416</b>	<b>11024</b>	<b>11597</b>	<b>12165</b>
T&D losses -MU	1076	1103	1130	1159	1186	1227	1254	1279	1306	1323	1335
T&D losses -in %	13.10	12.83	12.54	12.24	11.92	11.60	11.27	10.93	10.59	10.24	9.89
<b>Energy Requirement - MU</b>	<b>8210</b>	<b>8599</b>	<b>9016</b>	<b>9472</b>	<b>9945</b>	<b>10577</b>	<b>11125</b>	<b>11694</b>	<b>12330</b>	<b>12920</b>	<b>13500</b>
Annual Load Factor - %	51.81	52.00	51.92	51.84	51.76	51.68	51.60	51.52	51.44	51.36	51.28
<b>Peak Demand - MW</b>	<b>1809</b>	<b>1888</b>	<b>1982</b>	<b>2086</b>	<b>2193</b>	<b>2336</b>	<b>2461</b>	<b>2591</b>	<b>2736</b>	<b>2872</b>	<b>3005</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	17.67	17.73	17.75	17.71	17.68	17.43	17.40	17.43	17.51	17.85	18.12
Commercial	6.57	6.73	6.88	7.01	7.14	7.18	7.31	7.46	7.61	7.87	8.08
Irrigation	45.55	45.86	46.07	46.14	46.17	46.94	47.03	47.07	46.90	46.94	47.05
Industrial	10.24	9.84	9.65	9.73	9.84	9.80	9.93	10.02	10.35	10.00	9.68
Others	19.98	19.84	19.65	19.41	19.16	18.65	18.33	18.01	17.63	17.33	17.08
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

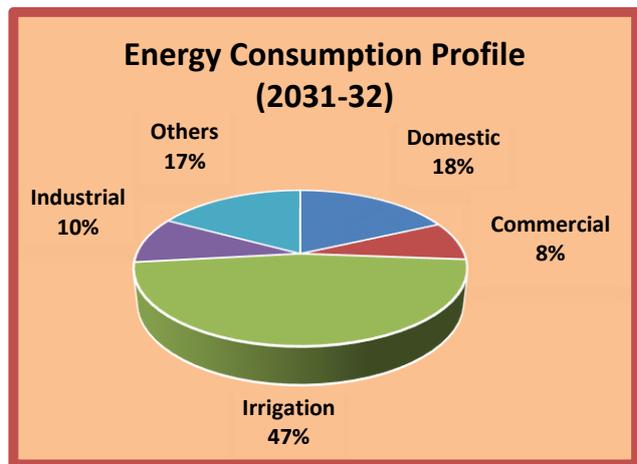
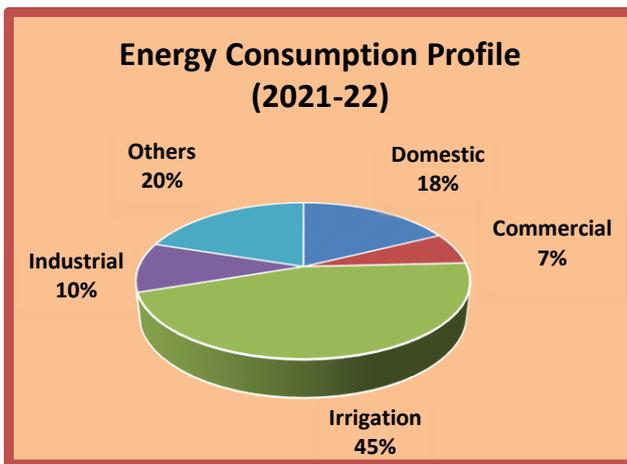


Table 5.54  
**Karnataka - GESCOM**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1623	1702	1784	1867	1952	2041	2133	2232	2340	2462	2573
2. Commercial	392	410	429	448	469	490	514	542	574	614	650
3. Public lighting	237	245	253	261	269	276	283	290	297	304	310
4. Public Water Works	555	575	596	617	637	657	676	696	714	732	750
5. Irrigation	3186	3228	3266	3302	3334	3408	3505	3543	3577	3605	3627
6. LT Industries	177	180	182	183	184	185	186	187	188	188	189
7. HT Industries	925	944	990	1082	1186	1297	1414	1532	1716	1747	1766
8. Railway Traction	27	28	30	32	33	35	37	38	40	42	44
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	166	176	185	195	205	215	226	236	247	258	269
<b>Total Energy Consumption</b>	<b>7288</b>	<b>7489</b>	<b>7715</b>	<b>7986</b>	<b>8269</b>	<b>8603</b>	<b>8974</b>	<b>9297</b>	<b>9693</b>	<b>9952</b>	<b>10178</b>
T&D losses -MU	1110	1136	1165	1197	1229	1266	1305	1333	1369	1381	1386
T&D losses -in %	13.21	13.17	13.12	13.04	12.94	12.83	12.69	12.54	12.37	12.19	11.99
<b>Energy Requirement - MU</b>	<b>8398</b>	<b>8625</b>	<b>8880</b>	<b>9183</b>	<b>9498</b>	<b>9869</b>	<b>10279</b>	<b>10630</b>	<b>11062</b>	<b>11334</b>	<b>11564</b>
Annual Load Factor - %	50.57	50.91	50.79	50.67	50.55	50.43	50.31	50.19	50.07	49.95	49.83
<b>Peak Demand - MW</b>	<b>1896</b>	<b>1934</b>	<b>1996</b>	<b>2069</b>	<b>2145</b>	<b>2234</b>	<b>2333</b>	<b>2418</b>	<b>2522</b>	<b>2590</b>	<b>2649</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	22.26	22.73	23.12	23.38	23.61	23.72	23.77	24.00	24.14	24.74	25.28
Commercial	5.38	5.48	5.56	5.61	5.67	5.70	5.73	5.83	5.92	6.17	6.39
Irrigation	43.72	43.10	42.34	41.35	40.32	39.62	39.06	38.12	36.90	36.22	35.63
Industrial	15.13	15.01	15.19	15.84	16.57	17.22	17.83	18.49	19.65	19.45	19.21
Others	13.51	13.68	13.79	13.82	13.83	13.75	13.62	13.56	13.40	13.42	13.48
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

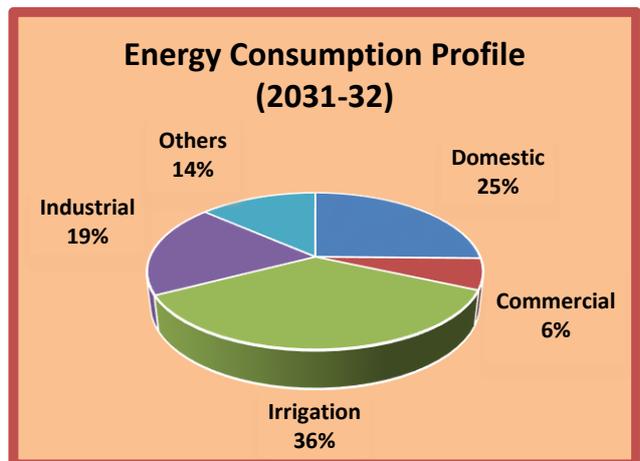
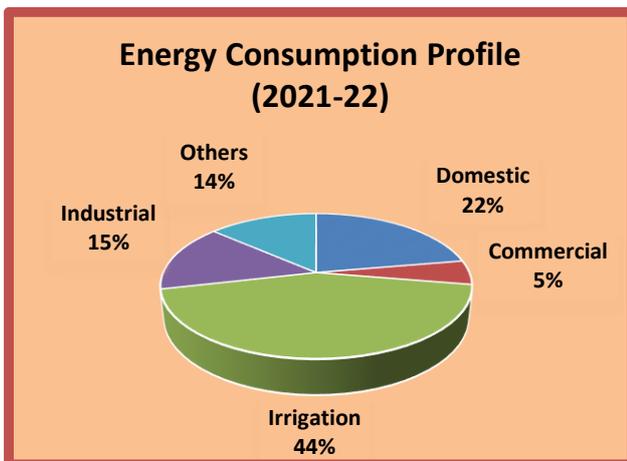


Table 5.55  
**Karnataka - HESCOM**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	2064	2171	2283	2398	2519	2646	2782	2931	3100	3298	3481
2. Commercial	564	590	617	645	675	709	746	791	846	917	987
3. Public lighting	157	161	166	170	174	178	182	186	190	194	198
4. Public Water Works	714	770	829	892	958	1029	1103	1182	1266	1354	1447
5. Irrigation	6416	6568	6722	6878	7036	7376	7566	7753	7937	8117	8293
6. LT Industries	322	326	330	333	335	338	342	345	347	349	351
7. HT Industries	1023	1059	1127	1247	1383	1527	1681	1838	2070	2117	2154
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	344	357	370	383	397	410	423	437	450	463	477
10. Others	483	510	539	568	599	630	662	696	730	766	802
<b>Total Energy Consumption</b>	<b>12087</b>	<b>12514</b>	<b>12983</b>	<b>13515</b>	<b>14075</b>	<b>14843</b>	<b>15489</b>	<b>16159</b>	<b>16936</b>	<b>17575</b>	<b>18189</b>
T&D losses -MU	1934	1987	2043	2106	2169	2260	2327	2393	2469	2520	2561
T&D losses -in %	13.79	13.70	13.60	13.48	13.35	13.21	13.06	12.90	12.72	12.54	12.34
<b>Energy Requirement - MU</b>	<b>14021</b>	<b>14501</b>	<b>15026</b>	<b>15621</b>	<b>16245</b>	<b>17103</b>	<b>17816</b>	<b>18552</b>	<b>19405</b>	<b>20095</b>	<b>20751</b>
Annual Load Factor - %	51.93	51.76	51.67	51.58	51.49	51.40	51.31	51.22	51.13	51.04	50.95
<b>Peak Demand - MW</b>	<b>3082</b>	<b>3198</b>	<b>3320</b>	<b>3457</b>	<b>3602</b>	<b>3799</b>	<b>3964</b>	<b>4135</b>	<b>4333</b>	<b>4495</b>	<b>4650</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	17.07	17.35	17.58	17.75	17.90	17.83	17.96	18.14	18.30	18.76	19.14
Commercial	4.67	4.72	4.75	4.77	4.80	4.77	4.82	4.90	5.00	5.22	5.43
Irrigation	53.08	52.48	51.78	50.90	49.98	49.69	48.85	47.98	46.87	46.19	45.59
Industrial	11.13	11.07	11.22	11.69	12.21	12.57	13.06	13.51	14.27	14.03	13.77
Others	14.05	14.37	14.66	14.90	15.11	15.14	15.31	15.48	15.57	15.80	16.07
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

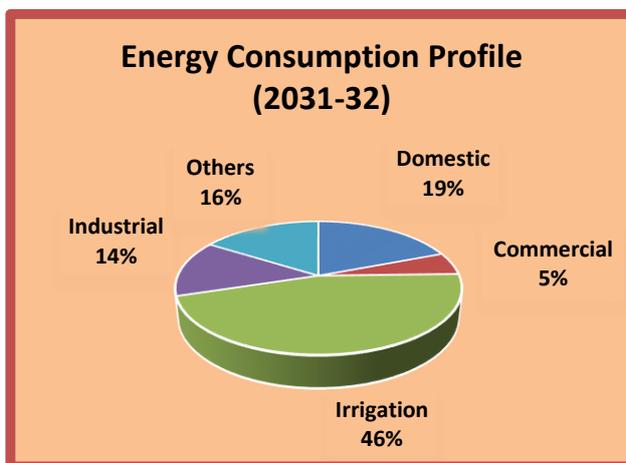
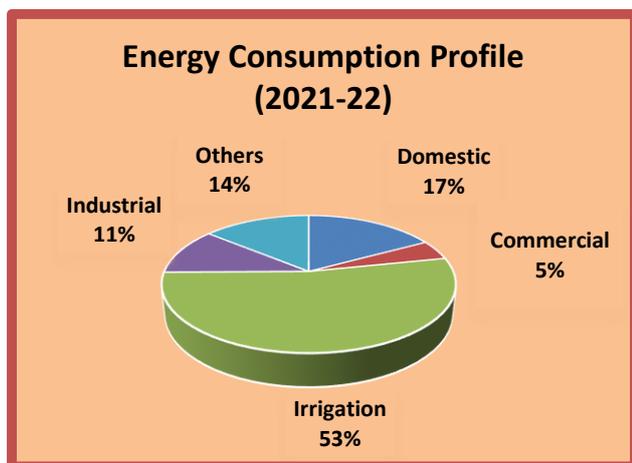


Table 5.56  
**Karnataka - MESCOM**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1632	1704	1777	1852	1930	2012	2100	2197	2310	2447	2571
2. Commercial	605	629	652	677	702	728	758	791	831	881	927
3. Public lighting	70	71	73	75	77	78	80	82	83	85	86
4. Public Water Works	252	262	272	282	292	303	313	323	333	343	353
5. Irrigation	1846	1954	2068	2187	2311	2506	2656	2811	2971	3136	3306
6. LT Industries	124	125	126	127	128	129	130	130	131	131	131
7. HT Industries	558	570	598	653	714	779	846	914	1018	1038	1048
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	62	64	67	69	71	73	75	77	79	81	83
10. Others	422	451	481	512	544	578	613	650	688	727	767
<b>Total Energy Consumption</b>	<b>5571</b>	<b>5831</b>	<b>6114</b>	<b>6433</b>	<b>6770</b>	<b>7186</b>	<b>7570</b>	<b>7974</b>	<b>8442</b>	<b>8869</b>	<b>9272</b>
T&D losses -MU	813	840	869	900	932	971	1003	1034	1071	1098	1119
T&D losses -in %	12.73	12.59	12.44	12.28	12.10	11.90	11.70	11.48	11.26	11.02	10.77
<b>Energy Requirement - MU</b>	<b>6384</b>	<b>6671</b>	<b>6983</b>	<b>7333</b>	<b>7702</b>	<b>8157</b>	<b>8573</b>	<b>9008</b>	<b>9513</b>	<b>9967</b>	<b>10391</b>
Annual Load Factor - %	53.34	53.40	53.31	53.22	53.13	53.04	52.95	52.86	52.77	52.68	52.59
<b>Peak Demand - MW</b>	<b>1366</b>	<b>1426</b>	<b>1495</b>	<b>1573</b>	<b>1655</b>	<b>1756</b>	<b>1848</b>	<b>1945</b>	<b>2058</b>	<b>2160</b>	<b>2255</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	29.29	29.22	29.07	28.80	28.51	28.00	27.74	27.55	27.36	27.59	27.73
Commercial	10.86	10.78	10.67	10.52	10.37	10.14	10.01	9.92	9.84	9.94	10.00
Irrigation	33.14	33.52	33.82	33.99	34.14	34.88	35.08	35.25	35.19	35.36	35.66
Industrial	12.24	11.93	11.85	12.12	12.44	12.63	12.89	13.09	13.60	13.18	12.72
Others	14.46	14.55	14.59	14.57	14.54	14.36	14.28	14.19	14.01	13.93	13.90
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

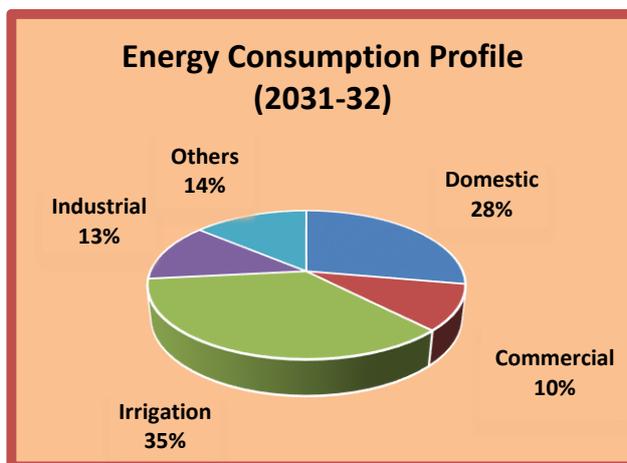
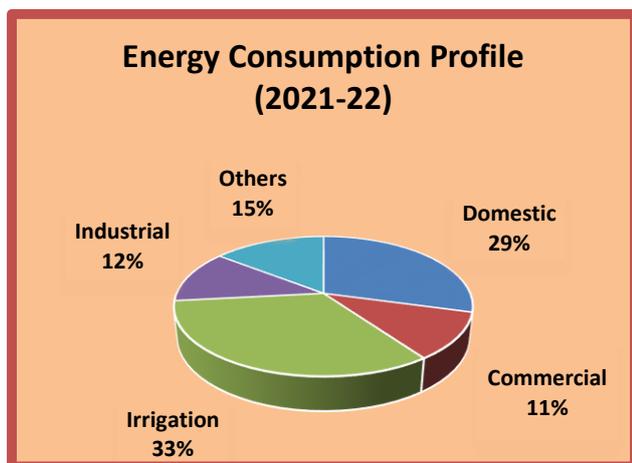


Table 5.57  
**KARNATAKA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	14207	14849	15502	16168	16847	17544	18267	19031	19860	20794	21621
2. Commercial	5223	5397	5574	5754	5939	6132	6338	6567	6832	7154	7449
3. Public lighting	1097	1140	1184	1227	1272	1316	1360	1405	1449	1493	1537
4. Public Water Works	4385	4668	4964	5274	5598	5936	6289	6657	7040	7439	7853
5. Irrigation	20700	21320	21952	22595	23249	24652	25538	26373	27208	28041	28868
6. LT Industries	1810	1853	1890	1921	1944	1957	1975	1994	2015	2038	2063
7. HT Industries	6560	6655	6933	7532	8232	8978	9787	10609	11877	12096	12280
8. Railway Traction	210	227	280	317	385	418	453	488	548	578	600
9. Bulk Supply	5054	5199	5344	5487	5629	5768	5905	6040	6172	6300	6425
10. Others	3329	3464	3601	3741	3883	4026	4171	4318	4466	4615	4765
<b>Total Energy Consumption</b>	<b>62575</b>	<b>64772</b>	<b>67224</b>	<b>70017</b>	<b>72975</b>	<b>76726</b>	<b>80085</b>	<b>83482</b>	<b>87467</b>	<b>90548</b>	<b>93460</b>
T&D losses -MU	9613	9799	9997	10226	10450	10765	10995	11202	11454	11561	11620
T&D losses -in %	13.32	13.14	12.95	12.74	12.53	12.30	12.07	11.83	11.58	11.32	11.06
Energy Requirement - MU	72188	74571	77222	80242	83425	87491	91081	94684	98920	102108	105080
Annual Load Factor - %	55.52	56.47	56.38	56.28	56.19	56.08	55.97	55.85	55.75	55.63	55.50
<b>Peak Demand - MW</b>	<b>14841</b>	<b>15075</b>	<b>15636</b>	<b>16277</b>	<b>16947</b>	<b>17810</b>	<b>18578</b>	<b>19352</b>	<b>20254</b>	<b>20954</b>	<b>21613</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>72799</b>	<b>75202</b>	<b>77876</b>	<b>80922</b>	<b>84132</b>	<b>88232</b>	<b>91852</b>	<b>95486</b>	<b>99758</b>	<b>102973</b>	<b>105970</b>
T&D losses (Ex- Bus) -in %	14.04	13.87	13.68	13.48	13.26	13.04	12.81	12.57	12.32	12.07	11.81

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	22.70	22.92	23.06	23.09	23.09	22.87	22.81	22.80	22.71	22.96	23.13
Commercial	8.35	8.33	8.29	8.22	8.14	7.99	7.91	7.87	7.81	7.90	7.97
Irrigation	33.08	32.91	32.65	32.27	31.86	32.13	31.89	31.59	31.11	30.97	30.89
Industrial	13.38	13.13	13.13	13.50	13.94	14.25	14.69	15.10	15.88	15.61	15.35
Others	22.49	22.69	22.87	22.92	22.97	22.76	22.70	22.65	22.49	22.56	22.66
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

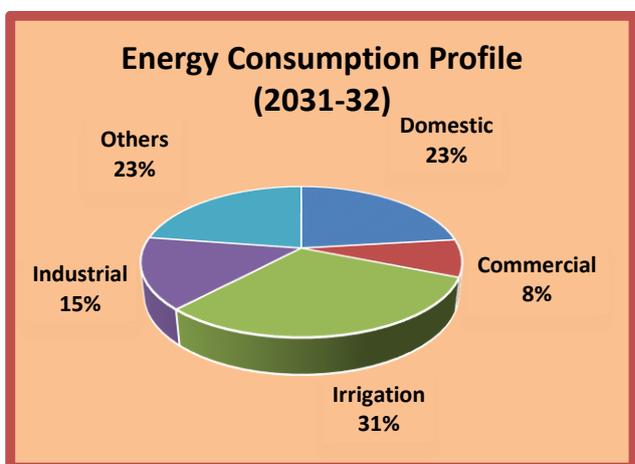
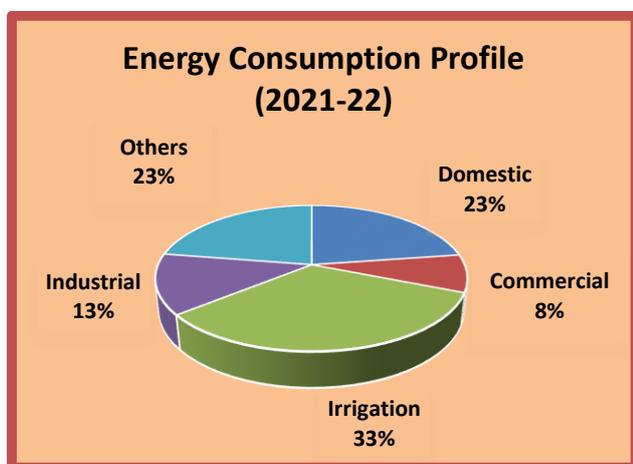


Table 5.58  
**KERALA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	12919	13641	14385	15153	15947	16774	17642	18569	19579	20714	21813
2. Commercial	4343	4587	4839	5100	5371	5656	5959	6287	6652	7073	7481
3. Public lighting	377	386	395	404	412	420	427	434	440	446	451
4. Public Water Works	392	405	417	428	439	450	461	471	481	490	498
5. Irrigation	401	411	419	427	434	448	456	463	470	476	482
6. LT Industries	942	976	1009	1041	1072	1101	1128	1152	1172	1189	1200
7. HT Industries	2632	2755	2936	3214	3528	3865	4230	4610	5150	5240	5315
8. Railway Traction	151	160	169	179	189	199	209	220	231	242	253
9. Bulk Supply	496	513	530	546	562	578	593	607	622	635	648
10. Others	406	420	435	449	463	477	491	504	517	530	541
<b>Total Energy Consumption</b>	<b>23061</b>	<b>24255</b>	<b>25534</b>	<b>26940</b>	<b>28418</b>	<b>29968</b>	<b>31596</b>	<b>33317</b>	<b>35314</b>	<b>37034</b>	<b>38683</b>
T&D losses -MU	3005	3051	3096	3143	3186	3223	3254	3282	3321	3320	3302
T&D losses -in %	11.53	11.17	10.81	10.45	10.08	9.71	9.34	8.97	8.60	8.23	7.86
Energy Requirement - MU	26066	27306	28630	30083	31603	33191	34850	36599	38636	40354	41985
Annual Load Factor - %	67.78	67.88	67.98	68.08	68.18	68.28	68.38	68.48	68.59	68.69	68.79
<b>Peak Demand - MW</b>	<b>4390</b>	<b>4592</b>	<b>4808</b>	<b>5044</b>	<b>5291</b>	<b>5549</b>	<b>5818</b>	<b>6101</b>	<b>6431</b>	<b>6707</b>	<b>6967</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>26626</b>	<b>27892</b>	<b>29244</b>	<b>30729</b>	<b>32281</b>	<b>33903</b>	<b>35597</b>	<b>37384</b>	<b>39464</b>	<b>41220</b>	<b>42885</b>
T&D losses (Ex- Bus) -in %	13.39	13.04	12.69	12.33	11.97	11.61	11.24	10.88	10.52	10.16	9.80

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	56.02	56.24	56.34	56.25	56.12	55.97	55.84	55.73	55.44	55.93	56.39
Commercial	18.83	18.91	18.95	18.93	18.90	18.87	18.86	18.87	18.84	19.10	19.34
Irrigation	1.74	1.69	1.64	1.58	1.53	1.49	1.44	1.39	1.33	1.28	1.25
Industrial	15.50	15.38	15.45	15.79	16.19	16.57	16.96	17.29	17.90	17.36	16.84
Others	7.90	7.77	7.62	7.45	7.27	7.09	6.90	6.71	6.49	6.32	6.18
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

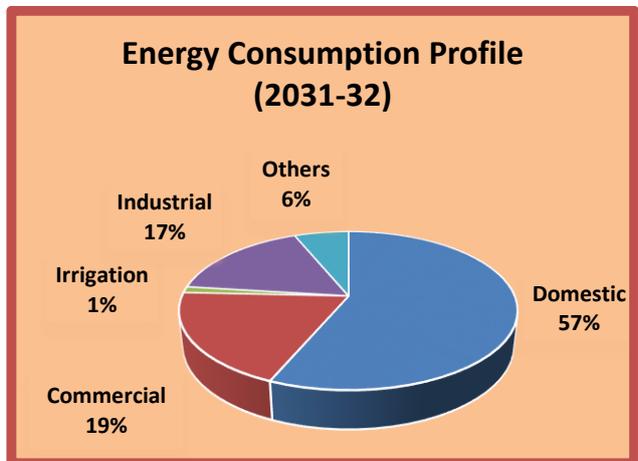
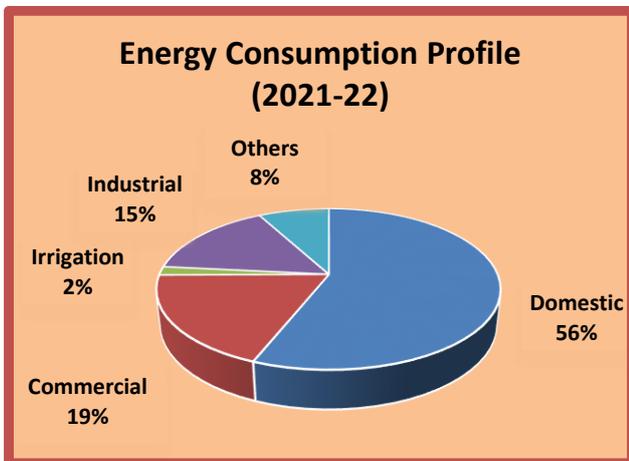


Table 5.59  
**LAKSHADWEEP**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	37	38	39	41	42	43	44	46	47	48	49
2. Commercial	11	12	12	13	14	14	15	15	16	16	17
3. Public lighting	1	1	1	1	1	1	1	1	1	1	1
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	0	0	0	0	0	0	0	0	1	1	1
7. HT Industries	1	1	1	1	1	2	2	2	2	3	3
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>51</b>	<b>52</b>	<b>54</b>	<b>56</b>	<b>58</b>	<b>60</b>	<b>62</b>	<b>65</b>	<b>67</b>	<b>69</b>	<b>71</b>
T&D losses -MU	6	6	6	6	6	6	6	6	6	6	6
T&D losses -in %	10.17	9.96	9.74	9.51	9.28	9.05	8.81	8.58	8.33	8.09	7.85
Energy Requirement - MU	56	58	60	62	64	66	68	71	73	75	77
Annual Load Factor - %	57.37	57.49	57.62	57.75	57.87	58.00	58.13	58.25	58.38	58.51	58.64
<b>Peak Demand - MW</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>15</b>	<b>15</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>56</b>	<b>58</b>	<b>60</b>	<b>62</b>	<b>64</b>	<b>66</b>	<b>68</b>	<b>71</b>	<b>73</b>	<b>75</b>	<b>77</b>
T&D losses (Ex- Bus) -in %	10.17	9.96	9.74	9.51	9.28	9.05	8.81	8.58	8.33	8.09	7.85

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	73.23	72.91	72.59	72.25	71.89	71.52	71.14	70.74	70.31	69.87	69.41
Commercial	22.63	22.80	22.96	23.12	23.28	23.43	23.58	23.72	23.86	23.99	24.12
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	2.52	2.69	2.87	3.07	3.29	3.53	3.79	4.07	4.38	4.71	5.08
Others	1.62	1.60	1.58	1.56	1.53	1.51	1.49	1.47	1.44	1.42	1.40
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

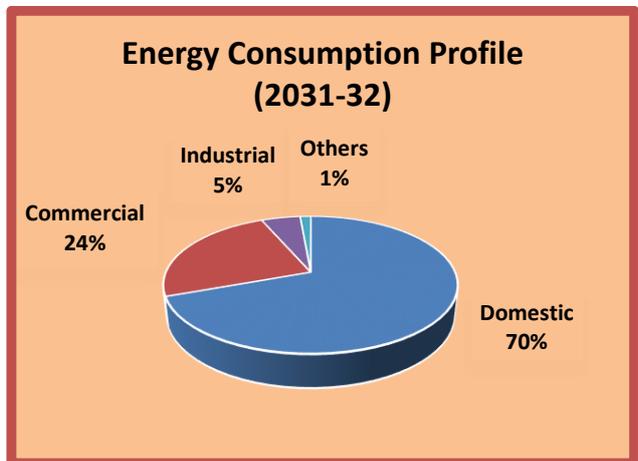
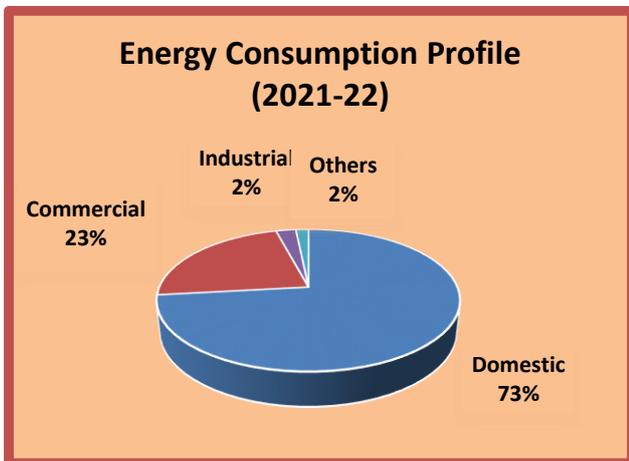


Table 5.60  
**PUDUCHERRY**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	806	839	872	906	940	978	1018	1061	1111	1171	1226
2. Commercial	152	207	212	218	224	232	241	251	265	285	303
3. Public lighting	23	23	24	24	24	24	24	25	25	25	25
4. Public Water Works	35	36	37	38	38	39	40	41	41	42	43
5. Irrigation	61	62	64	65	66	67	68	69	69	70	71
6. LT Industries	115	118	120	123	125	126	128	128	129	130	131
7. HT Industries	904	933	965	1007	1048	1092	1134	1176	1227	1233	1230
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	416	422	428	433	438	442	446	449	453	455	458
10. Others	17	18	19	20	21	22	23	24	25	26	27
<b>Total Energy Consumption</b>	<b>2530</b>	<b>2658</b>	<b>2740</b>	<b>2832</b>	<b>2924</b>	<b>3022</b>	<b>3120</b>	<b>3224</b>	<b>3345</b>	<b>3438</b>	<b>3514</b>
T&D losses -MU	302	311	314	318	321	324	326	328	332	332	329
T&D losses -in %	10.66	10.48	10.29	10.09	9.89	9.68	9.47	9.25	9.02	8.80	8.57
Energy Requirement - MU	2832	2969	3054	3150	3245	3346	3447	3552	3677	3769	3844
Annual Load Factor - %	68.35	67.49	67.47	67.44	67.42	67.39	67.37	67.34	67.32	67.29	67.27
<b>Peak Demand - MW</b>	<b>473</b>	<b>502</b>	<b>517</b>	<b>533</b>	<b>549</b>	<b>567</b>	<b>584</b>	<b>602</b>	<b>624</b>	<b>639</b>	<b>652</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>2907</b>	<b>3048</b>	<b>3136</b>	<b>3234</b>	<b>3332</b>	<b>3436</b>	<b>3539</b>	<b>3647</b>	<b>3776</b>	<b>3870</b>	<b>3947</b>
T&D losses (Ex- Bus) -in %	12.99	12.81	12.63	12.44	12.24	12.04	11.83	11.62	11.40	11.18	10.95

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	31.85	31.56	31.81	31.99	32.16	32.37	32.61	32.92	33.21	34.07	34.90
Commercial	6.02	7.78	7.75	7.71	7.68	7.68	7.71	7.80	7.93	8.28	8.62
Irrigation	2.42	2.35	2.32	2.28	2.25	2.21	2.17	2.13	2.08	2.04	2.02
Industrial	40.28	39.53	39.63	39.88	40.11	40.31	40.43	40.45	40.53	39.65	38.73
Others	19.43	18.79	18.50	18.15	17.81	17.44	17.08	16.71	16.25	15.96	15.73
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

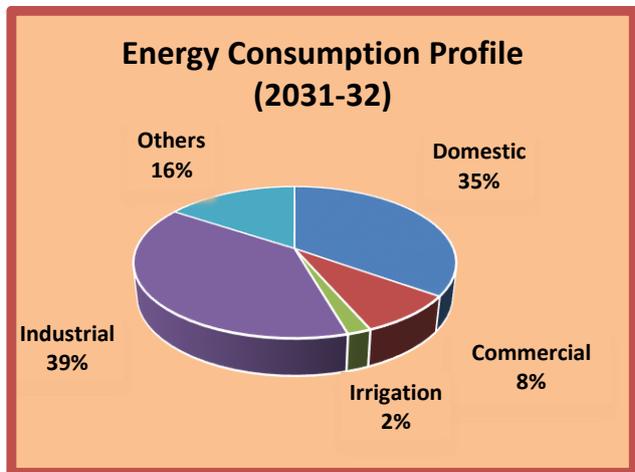
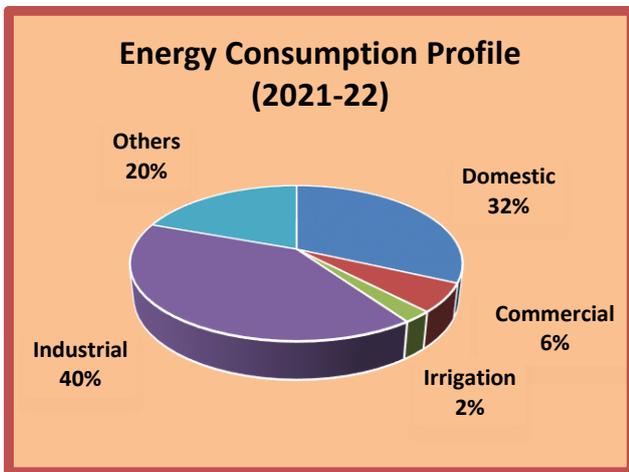


Table 5.61  
**TAMILNADU**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	31606	33819	36147	38600	41190	43942	46887	50076	53587	57538	61575
2. Commercial	7823	8313	8826	9368	9945	10566	11246	12010	12890	13941	15014
3. Public lighting	1130	1179	1228	1278	1328	1378	1427	1477	1525	1573	1621
4. Public Water Works	1890	1997	2107	2219	2335	2452	2572	2694	2818	2943	3069
5. Irrigation	14371	15067	15774	16492	17220	18018	18773	19530	20287	21044	21798
6. LT Industries	8538	8995	9462	9937	10419	10906	11397	11888	12379	12864	13343
7. HT Industries	8123	8390	8899	9830	10906	12062	13318	14618	16605	16770	16824
8. Railway Traction	588	627	668	711	755	801	848	897	947	999	1052
9. Bulk Supply	199	216	234	253	274	296	319	343	369	396	424
10. Others	18357	19303	20268	21251	22249	23262	24285	25317	26355	27396	28438
<b>Total Energy Consumption</b>	<b>92625</b>	<b>97905</b>	<b>103612</b>	<b>109939</b>	<b>116621</b>	<b>123683</b>	<b>131072</b>	<b>138850</b>	<b>147762</b>	<b>155466</b>	<b>163156</b>
T&D losses -MU	15805	16319	16842	17398	17937	18458	18949	19414	19948	20233	20437
T&D losses -in %	14.58	14.29	13.98	13.66	13.33	12.99	12.63	12.27	11.89	11.52	11.13
Energy Requirement - MU	108430	114224	120454	127337	134558	142141	150021	158264	167711	175699	183594
Annual Load Factor - %	73.25	75.11	74.99	74.88	74.76	74.65	74.54	74.42	74.31	74.19	74.08
<b>Peak Demand - MW</b>	<b>16899</b>	<b>17361</b>	<b>18336</b>	<b>19413</b>	<b>20545</b>	<b>21736</b>	<b>22976</b>	<b>24276</b>	<b>25764</b>	<b>27033</b>	<b>28291</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>109914</b>	<b>115788</b>	<b>122102</b>	<b>129079</b>	<b>136399</b>	<b>144086</b>	<b>152074</b>	<b>160430</b>	<b>170006</b>	<b>178103</b>	<b>186106</b>
T&D losses (Ex- Bus) -in %	15.73	15.44	15.14	14.83	14.50	14.16	13.81	13.45	13.08	12.71	12.33

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	34.12	34.54	34.89	35.11	35.32	35.53	35.77	36.06	36.27	37.01	37.74
Commercial	8.45	8.49	8.52	8.52	8.53	8.54	8.58	8.65	8.72	8.97	9.20
Irrigation	15.52	15.39	15.22	15.00	14.77	14.57	14.32	14.07	13.73	13.54	13.36
Industrial	17.99	17.76	17.72	17.98	18.29	18.57	18.86	19.09	19.62	19.06	18.49
Others	23.93	23.82	23.65	23.39	23.10	22.79	22.47	22.13	21.67	21.42	21.21
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

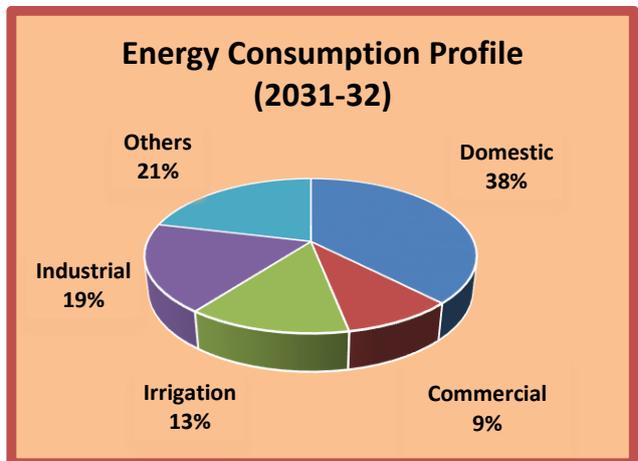
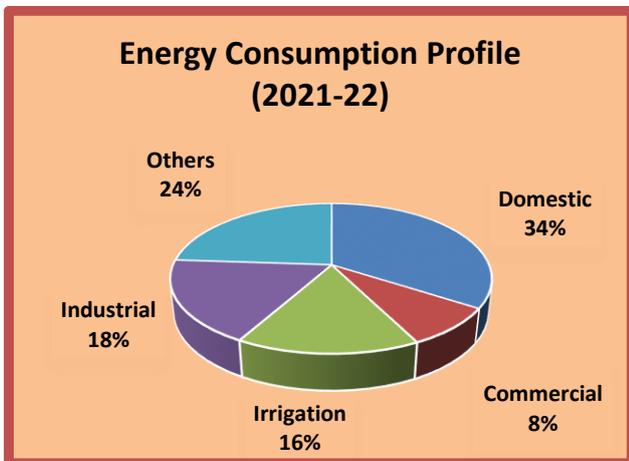


Table 5.62  
**Telangana - TSNPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	3836	4006	4282	4572	4877	5195	5528	5877	6244	6632	6998
2. Commercial	925	988	1055	1125	1200	1279	1364	1456	1557	1670	1779
3. Public lighting	84	88	91	94	98	101	105	108	112	115	118
4. Public Water Works	799	843	887	934	981	1031	1081	1133	1187	1242	1298
5. Irrigation	10114	10359	10806	11264	11732	12291	12793	13303	13820	14342	14871
6. LT Industries	252	256	261	265	268	271	274	275	278	282	284
7. HT Industries	1570	1703	1880	2128	2414	2728	3077	3451	3954	4144	4320
8. Railway Traction	394	401	407	414	419	425	430	435	439	443	447
9. Bulk Supply	1295	1368	1443	1521	1601	1684	1770	1858	1949	2042	2138
10. Others	409	423	438	453	467	482	497	512	526	541	555
<b>Total Energy Consumption</b>	<b>19677</b>	<b>20434</b>	<b>21550</b>	<b>22769</b>	<b>24057</b>	<b>25488</b>	<b>26918</b>	<b>28408</b>	<b>30065</b>	<b>31452</b>	<b>32809</b>
T&D losses -MU	2440	2529	2658	2797	2939	3093	3241	3391	3553	3676	3788
T&D losses -in %	11.03	11.01	10.98	10.94	10.89	10.82	10.75	10.66	10.57	10.46	10.35
<b>Energy Requirement - MU</b>	<b>22117</b>	<b>22963</b>	<b>24208</b>	<b>25566</b>	<b>26996</b>	<b>28581</b>	<b>30160</b>	<b>31799</b>	<b>33618</b>	<b>35128</b>	<b>36597</b>
Annual Load Factor - %	40.27	39.86	39.45	39.03	38.62	38.20	37.79	37.37	36.96	36.54	36.13
<b>Peak Demand - MW</b>	<b>6269</b>	<b>6576</b>	<b>7005</b>	<b>7477</b>	<b>7980</b>	<b>8540</b>	<b>9111</b>	<b>9713</b>	<b>10384</b>	<b>10974</b>	<b>11564</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	19.49	19.60	19.87	20.08	20.27	20.38	20.54	20.69	20.77	21.09	21.33
Commercial	4.70	4.84	4.89	4.94	4.99	5.02	5.07	5.12	5.18	5.31	5.42
Irrigation	51.40	50.69	50.14	49.47	48.77	48.22	47.53	46.83	45.97	45.60	45.32
Industrial	9.25	9.59	9.93	10.51	11.15	11.77	12.45	13.12	14.08	14.07	14.03
Others	15.15	15.28	15.16	15.00	14.83	14.61	14.42	14.24	14.01	13.94	13.89
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

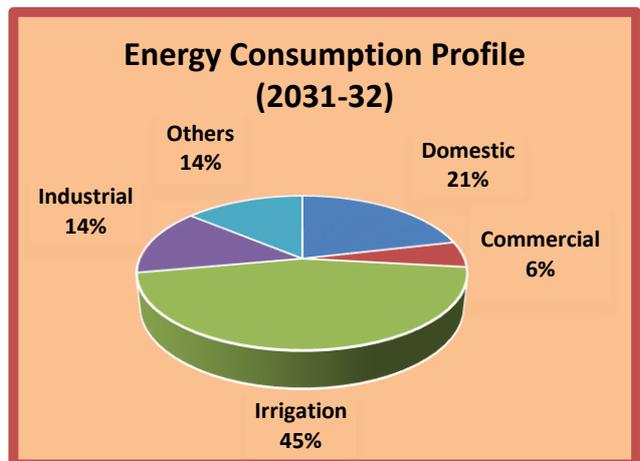
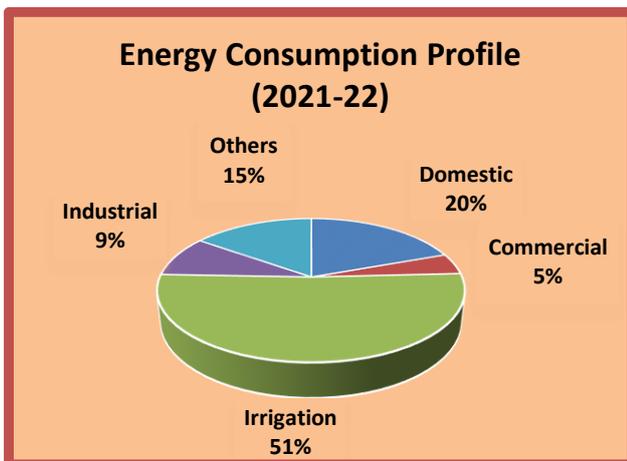


Table 5.63  
**Telangana - TSSPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	9211	9450	10094	10770	11481	12229	13015	13846	14732	15688	16594
2. Commercial	4954	5094	5437	5797	6173	6566	6977	7406	7857	8334	8782
3. Public lighting	262	274	286	298	310	323	335	348	361	374	388
4. Public Water Works	251	261	271	281	291	302	312	323	333	344	355
5. Irrigation	13519	13922	14635	15372	16135	17044	17880	18739	19621	20523	21446
6. LT Industries	911	947	984	1022	1061	1101	1141	1182	1222	1261	1299
7. HT Industries	10625	10895	11633	12673	13826	15046	16342	17673	19450	19877	20221
8. Railway Traction	306	370	386	402	419	436	453	471	488	506	524
9. Bulk Supply	1034	1108	1186	1268	1355	1446	1542	1643	1749	1859	1975
10. Others	1929	2051	2179	2313	2452	2598	2749	2907	3071	3240	3416
<b>Total Energy Consumption</b>	<b>43003</b>	<b>44372</b>	<b>47090</b>	<b>50197</b>	<b>53504</b>	<b>57090</b>	<b>60747</b>	<b>64538</b>	<b>68884</b>	<b>72007</b>	<b>75000</b>
T&D losses -MU	4900	5016	5275	5565	5865	6181	6488	6793	7137	7336	7505
T&D losses -in %	10.23	10.16	10.07	9.98	9.88	9.77	9.65	9.52	9.39	9.25	9.10
<b>Energy Requirement - MU</b>	<b>47903</b>	<b>49388</b>	<b>52365</b>	<b>55762</b>	<b>59369</b>	<b>63271</b>	<b>67235</b>	<b>71331</b>	<b>76021</b>	<b>79343</b>	<b>82505</b>
Annual Load Factor - %	65.41	65.89	64.97	64.04	63.12	62.19	61.27	60.34	59.42	58.49	57.57
<b>Peak Demand - MW</b>	<b>8360</b>	<b>8556</b>	<b>9201</b>	<b>9940</b>	<b>10738</b>	<b>11614</b>	<b>12528</b>	<b>13495</b>	<b>14606</b>	<b>15485</b>	<b>16361</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	21.42	21.30	21.43	21.46	21.46	21.42	21.42	21.45	21.39	21.79	22.12
Commercial	11.52	11.48	11.55	11.55	11.54	11.50	11.48	11.48	11.41	11.57	11.71
Irrigation	31.44	31.38	31.08	30.62	30.16	29.85	29.43	29.04	28.48	28.50	28.60
Industrial	26.83	26.69	26.79	27.28	27.82	28.28	28.78	29.22	30.01	29.36	28.69
Others	8.80	9.16	9.15	9.09	9.02	8.94	8.88	8.82	8.71	8.78	8.88
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

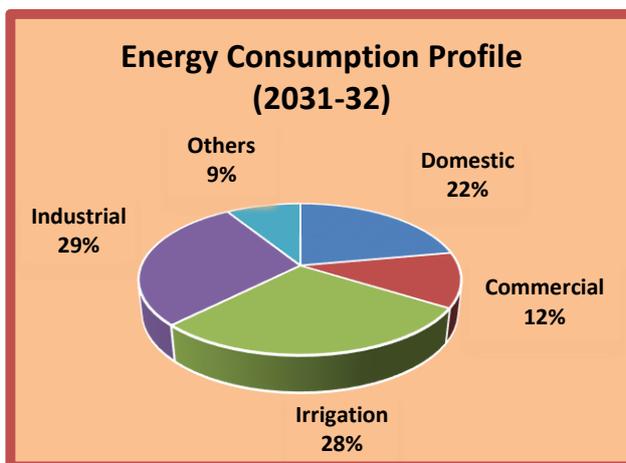
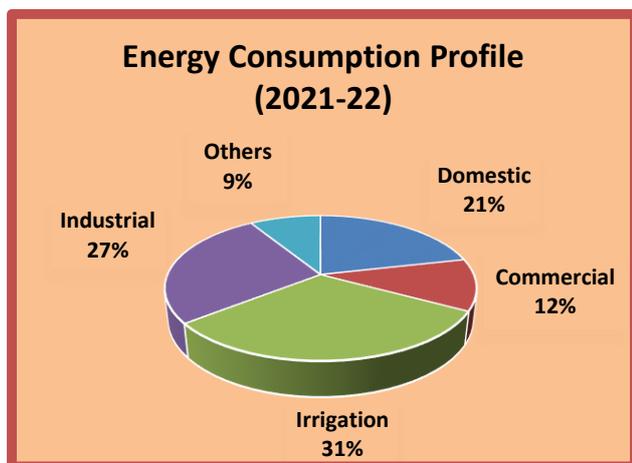


Table 5.64  
**TELANGANA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	13047	13456	14376	15342	16358	17424	18543	19723	20976	22320	23592
2. Commercial	5879	6082	6492	6922	7373	7845	8341	8862	9413	10003	10562
3. Public lighting	346	361	377	392	408	424	440	456	473	490	506
4. Public Water Works	1050	1103	1158	1215	1273	1332	1394	1456	1520	1586	1652
5. Irrigation	23632	24281	25441	26636	27866	29335	30673	32042	33440	34866	36317
6. LT Industries	1162	1203	1245	1287	1330	1372	1415	1457	1500	1543	1583
7. HT Industries	12195	12598	13512	14801	16239	17774	19418	21125	23404	24021	24541
8. Railway Traction	700	771	793	816	838	861	883	906	928	949	971
9. Bulk Supply	2330	2476	2629	2789	2956	3130	3312	3501	3698	3902	4113
10. Others	2338	2475	2617	2765	2920	3080	3246	3418	3597	3781	3972
<b>Total Energy Consumption</b>	<b>62680</b>	<b>64806</b>	<b>68640</b>	<b>72966</b>	<b>77561</b>	<b>82578</b>	<b>87665</b>	<b>92946</b>	<b>98949</b>	<b>103459</b>	<b>107809</b>
T&D losses -MU	7340	7544	7933	8362	8804	9274	9730	10184	10690	11012	11293
T&D losses -in %	10.48	10.43	10.36	10.28	10.19	10.10	9.99	9.87	9.75	9.62	9.48
Energy Requirement - MU	70021	72351	76573	81328	86365	91852	97395	103130	109639	114471	119102
Annual Load Factor - %	56.39	56.33	55.66	55.01	54.36	53.69	53.02	52.35	51.69	50.97	50.25
<b>Peak Demand - MW</b>	<b>14176</b>	<b>14663</b>	<b>15704</b>	<b>16877</b>	<b>18138</b>	<b>19529</b>	<b>20968</b>	<b>22488</b>	<b>24215</b>	<b>25639</b>	<b>27059</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>70871</b>	<b>73229</b>	<b>77503</b>	<b>82316</b>	<b>87414</b>	<b>92967</b>	<b>98578</b>	<b>104383</b>	<b>110971</b>	<b>115862</b>	<b>120549</b>
T&D losses (Ex- Bus) -in %	11.56	11.50	11.44	11.36	11.27	11.18	11.07	10.96	10.83	10.70	10.57

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	20.82	20.76	20.94	21.03	21.09	21.10	21.15	21.22	21.20	21.57	21.88
Commercial	9.38	9.39	9.46	9.49	9.51	9.50	9.51	9.53	9.51	9.67	9.80
Irrigation	37.70	37.47	37.06	36.51	35.93	35.52	34.99	34.47	33.80	33.70	33.69
Industrial	21.31	21.30	21.50	22.05	22.65	23.19	23.76	24.30	25.17	24.71	24.23
Others	10.79	11.09	11.03	10.93	10.82	10.69	10.58	10.48	10.32	10.35	10.40
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

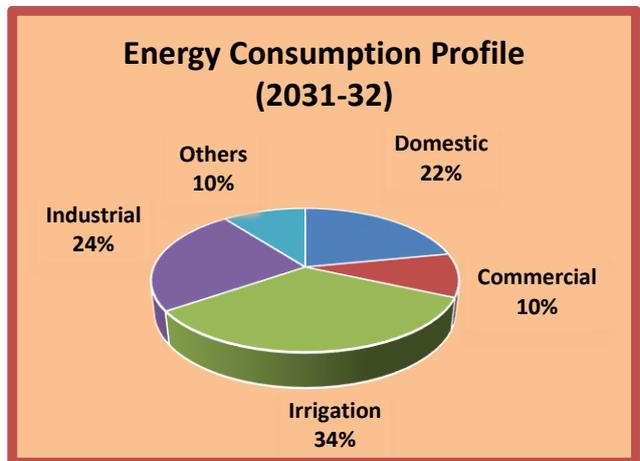
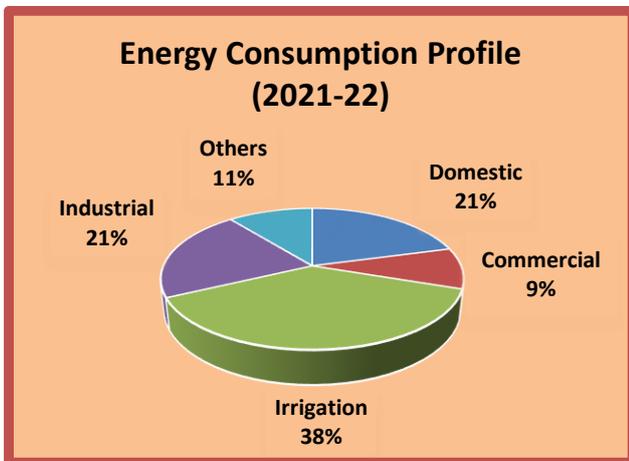


Table 5.65  
**ANDAMAN & NICOBAR**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	148	152	155	158	161	164	166	169	172	175	178
2. Commercial	63	67	70	73	76	80	83	86	89	93	96
3. Public lighting	7	7	7	8	8	8	8	9	9	9	10
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	1	1	1	1	1	1	2	2	2	2	2
6. LT Industries	11	12	13	13	14	14	15	15	15	15	15
7. HT Industries	0	0	0	0	0	0	0	0	0	0	0
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	37	38	38	39	40	41	42	43	44	44	45
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>267</b>	<b>276</b>	<b>284</b>	<b>292</b>	<b>300</b>	<b>308</b>	<b>315</b>	<b>322</b>	<b>330</b>	<b>338</b>	<b>345</b>
T&D losses -MU	71	69	66	64	62	60	58	55	53	51	49
T&D losses -in %	20.88	19.91	18.96	18.03	17.14	16.27	15.43	14.61	13.83	13.07	12.34
Energy Requirement - MU	338	345	350	357	363	368	373	378	383	389	394
Annual Load Factor - %	64.35	64.07	63.59	63.36	62.92	62.51	61.92	61.36	61.01	60.69	60.20
<b>Peak Demand - MW</b>	<b>60</b>	<b>61</b>	<b>63</b>	<b>64</b>	<b>66</b>	<b>67</b>	<b>69</b>	<b>70</b>	<b>72</b>	<b>73</b>	<b>75</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>338</b>	<b>345</b>	<b>350</b>	<b>357</b>	<b>363</b>	<b>368</b>	<b>373</b>	<b>378</b>	<b>383</b>	<b>389</b>	<b>394</b>
T&D losses (Ex- Bus) -in %	20.88	19.91	18.96	18.03	17.14	16.27	15.43	14.61	13.83	13.07	12.34

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	55.38	54.95	54.48	54.06	53.61	53.18	52.72	52.32	52.01	51.76	51.53
Commercial	23.67	24.10	24.51	24.95	25.37	25.79	26.20	26.59	26.98	27.34	27.66
Irrigation	0.44	0.45	0.45	0.46	0.46	0.47	0.48	0.48	0.49	0.49	0.50
Industrial	4.28	4.34	4.41	4.47	4.53	4.57	4.61	4.61	4.59	4.53	4.45
Others	16.22	16.16	16.14	16.06	16.03	15.99	16.00	16.00	15.94	15.87	15.85
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

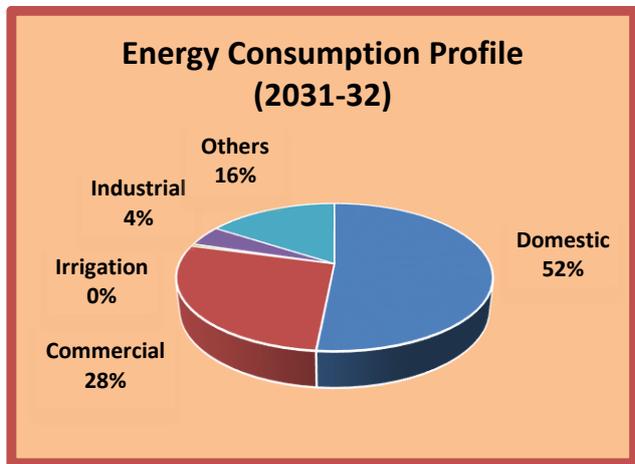
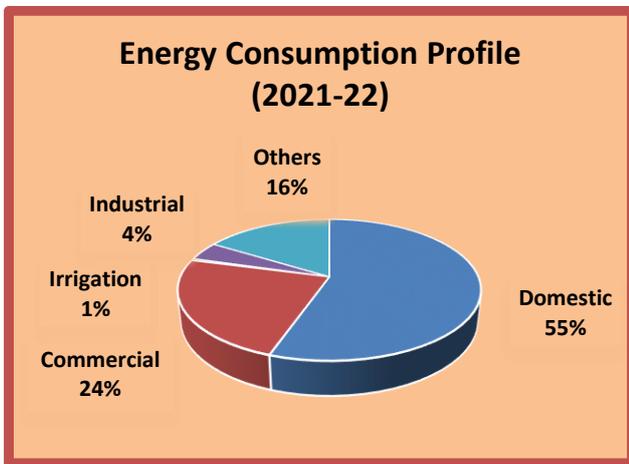


Table 5.66  
**Bihar - NBPDC**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	8327	9444	10248	11108	12027	13007	14048	15149	16307	17514	18698
2. Commercial	1253	1469	1603	1748	1906	2076	2262	2464	2684	2924	3165
3. Public lighting	37	40	43	46	49	53	56	60	64	69	73
4. Public Water Works	92	152	167	184	203	223	245	269	295	323	354
5. Irrigation	227	435	451	468	484	501	518	534	551	568	584
6. LT Industries	315	489	525	563	604	646	690	736	782	829	875
7. HT Industries	732	854	950	1078	1223	1383	1559	1748	1989	2118	2247
8. Railway Traction	36	40	44	50	55	61	68	76	84	93	103
9. Bulk Supply	660	689	719	749	779	811	842	874	907	939	972
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>11679</b>	<b>13611</b>	<b>14750</b>	<b>15993</b>	<b>17330</b>	<b>18760</b>	<b>20288</b>	<b>21910</b>	<b>23663</b>	<b>25377</b>	<b>27072</b>
T&D losses -MU	3518	3927	4073	4222	4370	4516	4657	4792	4927	5026	5096
T&D losses -in %	23.15	22.39	21.64	20.89	20.14	19.40	18.67	17.95	17.23	16.53	15.84
<b>Energy Requirement - MU</b>	<b>15196</b>	<b>17538</b>	<b>18823</b>	<b>20216</b>	<b>21701</b>	<b>23276</b>	<b>24944</b>	<b>26702</b>	<b>28589</b>	<b>30403</b>	<b>32168</b>
Annual Load Factor - %	52.53	56.30	56.02	55.73	55.45	55.16	54.88	54.60	54.31	53.93	53.34
<b>Peak Demand - MW</b>	<b>3302</b>	<b>3556</b>	<b>3836</b>	<b>4141</b>	<b>4468</b>	<b>4817</b>	<b>5189</b>	<b>5583</b>	<b>6009</b>	<b>6436</b>	<b>6884</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	71.30	69.39	69.47	69.45	69.40	69.33	69.24	69.14	68.91	69.01	69.07
Commercial	10.73	10.79	10.87	10.93	11.00	11.07	11.15	11.24	11.34	11.52	11.69
Irrigation	1.94	3.20	3.06	2.93	2.79	2.67	2.55	2.44	2.33	2.24	2.16
Industrial	8.97	9.86	10.00	10.26	10.54	10.81	11.08	11.34	11.71	11.61	11.53
Others	7.06	6.76	6.60	6.43	6.27	6.12	5.97	5.84	5.70	5.61	5.55
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

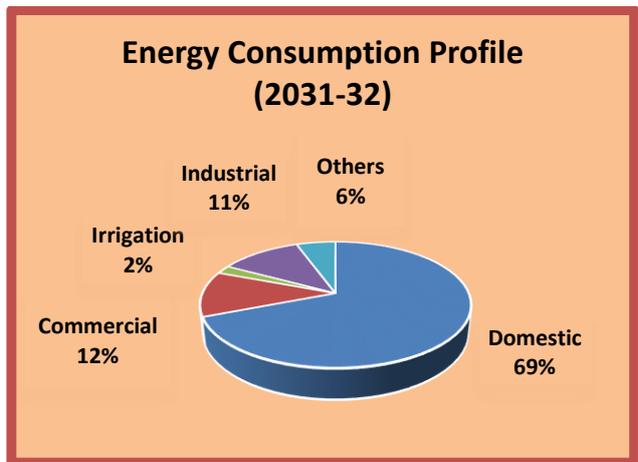
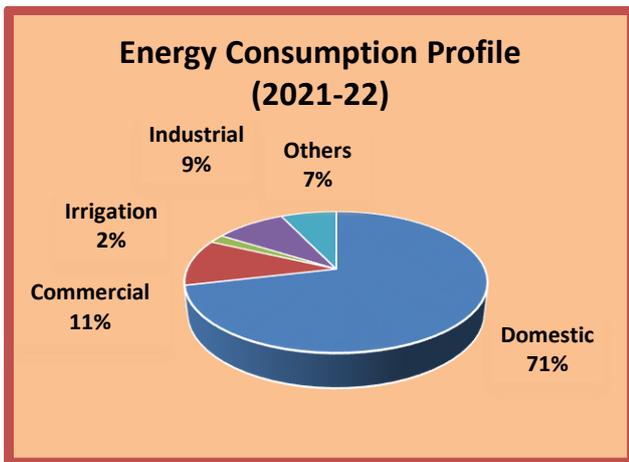


Table 5.67  
**Bihar - SBPDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	8638	10291	11297	12389	13571	14848	16224	17701	19276	20943	22619
2. Commercial	1314	1527	1658	1798	1950	2115	2293	2487	2700	2936	3171
3. Public lighting	74	80	86	93	99	107	114	122	131	140	149
4. Public Water Works	134	176	192	209	227	247	268	291	315	341	369
5. Irrigation	914	1111	1227	1354	1493	1645	1811	1991	2187	2401	2633
6. LT Industries	363	400	442	486	535	587	643	703	766	830	895
7. HT Industries	1800	1942	2126	2375	2654	2954	3278	3618	4053	4237	4411
8. Railway Traction	38	43	48	54	60	68	76	85	94	105	117
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	64	68	72	75	79	83	87	91	96	100	104
<b>Total Energy Consumption</b>	<b>13340</b>	<b>15639</b>	<b>17148</b>	<b>18834</b>	<b>20669</b>	<b>22653</b>	<b>24794</b>	<b>27088</b>	<b>29618</b>	<b>32033</b>	<b>34470</b>
T&D losses -MU	4985	5628	5936	6265	6601	6940	7278	7613	7962	8230	8456
T&D losses -in %	27.20	26.46	25.72	24.96	24.21	23.45	22.69	21.94	21.19	20.44	19.70
<b>Energy Requirement - MU</b>	<b>18325</b>	<b>21267</b>	<b>23084</b>	<b>25099</b>	<b>27271</b>	<b>29593</b>	<b>32072</b>	<b>34702</b>	<b>37580</b>	<b>40263</b>	<b>42926</b>
Annual Load Factor - %	57.22	61.05	60.74	60.42	60.11	59.80	59.49	59.18	58.86	58.35	57.64
<b>Peak Demand - MW</b>	<b>3656</b>	<b>3977</b>	<b>4339</b>	<b>4742</b>	<b>5179</b>	<b>5649</b>	<b>6154</b>	<b>6694</b>	<b>7288</b>	<b>7877</b>	<b>8501</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	64.75	65.81	65.88	65.78	65.66	65.55	65.44	65.34	65.08	65.38	65.62
Commercial	9.85	9.77	9.67	9.55	9.44	9.34	9.25	9.18	9.12	9.17	9.20
Irrigation	6.85	7.10	7.16	7.19	7.22	7.26	7.30	7.35	7.39	7.50	7.64
Industrial	16.21	14.98	14.98	15.19	15.43	15.63	15.81	15.95	16.27	15.82	15.39
Others	2.33	2.34	2.32	2.28	2.25	2.22	2.20	2.17	2.15	2.14	2.15
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

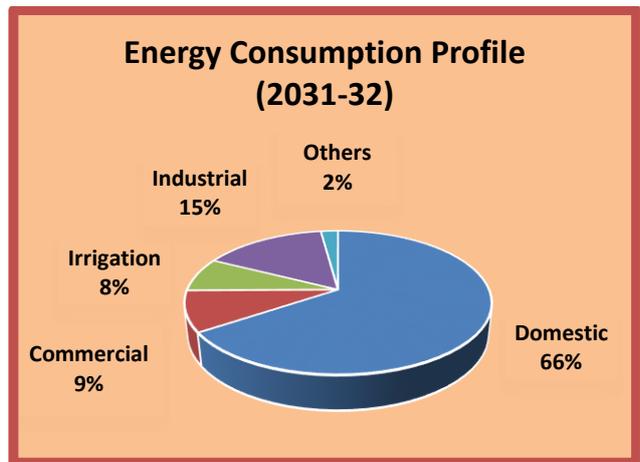
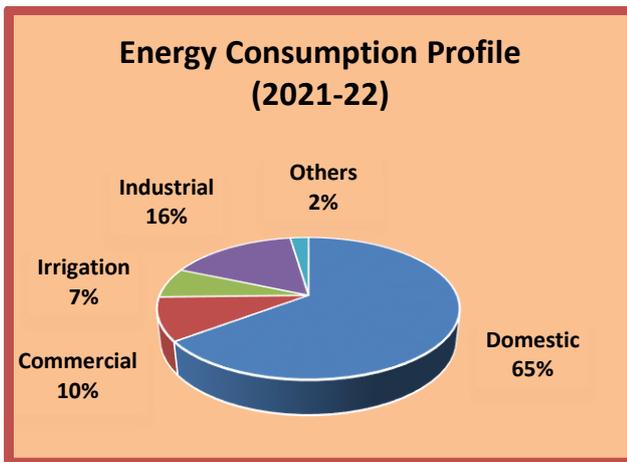


Table 5.68  
**Bihar**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	16965	19736	21545	23497	25598	27855	30272	32850	35583	38456	41318
2. Commercial	2567	2996	3261	3547	3856	4191	4555	4951	5384	5860	6336
3. Public lighting	111	120	129	138	148	159	170	182	195	208	222
4. Public Water Works	226	328	359	393	430	470	513	560	610	665	723
5. Irrigation	1141	1546	1679	1822	1978	2146	2328	2525	2738	2969	3217
6. LT Industries	678	889	967	1050	1139	1233	1333	1439	1548	1659	1770
7. HT Industries	2532	2796	3077	3453	3877	4337	4836	5366	6042	6355	6658
8. Railway Traction	2082	2272	2853	3258	4008	4375	4766	5145	5815	6156	6378
9. Bulk Supply	660	689	719	749	779	811	842	874	907	939	972
10. Others	64	68	72	75	79	83	87	91	96	100	104
<b>Total Energy Consumption</b>	<b>27026</b>	<b>31440</b>	<b>34658</b>	<b>37982</b>	<b>41892</b>	<b>45659</b>	<b>49703</b>	<b>53983</b>	<b>58917</b>	<b>63368</b>	<b>67699</b>
T&D losses -MU	8503	9555	10009	10488	10972	11455	11935	12405	12889	13256	13552
T&D losses -in %	23.93	23.31	22.41	21.64	20.76	20.06	19.36	18.69	17.95	17.30	16.68
Energy Requirement - MU	35529	40995	44667	48470	52864	57114	61639	66388	71806	76623	81251
Annual Load Factor - %	58.58	62.44	62.31	62.11	61.94	61.78	61.64	61.49	61.35	61.27	61.19
<b>Peak Demand - MW</b>	<b>6923</b>	<b>7495</b>	<b>8184</b>	<b>8908</b>	<b>9743</b>	<b>10553</b>	<b>11416</b>	<b>12326</b>	<b>13360</b>	<b>14276</b>	<b>15159</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>36239</b>	<b>41814</b>	<b>45560</b>	<b>49438</b>	<b>53920</b>	<b>58256</b>	<b>62871</b>	<b>67715</b>	<b>73241</b>	<b>78155</b>	<b>82876</b>
T&D losses (Ex- Bus) -in %	25.42	24.81	23.93	23.17	22.31	21.62	20.94	20.28	19.56	18.92	18.31

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	62.77	62.77	62.16	61.86	61.10	61.01	60.90	60.85	60.39	60.69	61.03
Commercial	9.50	9.53	9.41	9.34	9.20	9.18	9.16	9.17	9.14	9.25	9.36
Irrigation	4.22	4.92	4.84	4.80	4.72	4.70	4.68	4.68	4.65	4.68	4.75
Industrial	11.88	11.72	11.67	11.86	11.97	12.20	12.41	12.60	12.88	12.65	12.45
Others	11.63	11.06	11.92	12.15	13.00	12.92	12.83	12.69	12.94	12.73	12.41
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

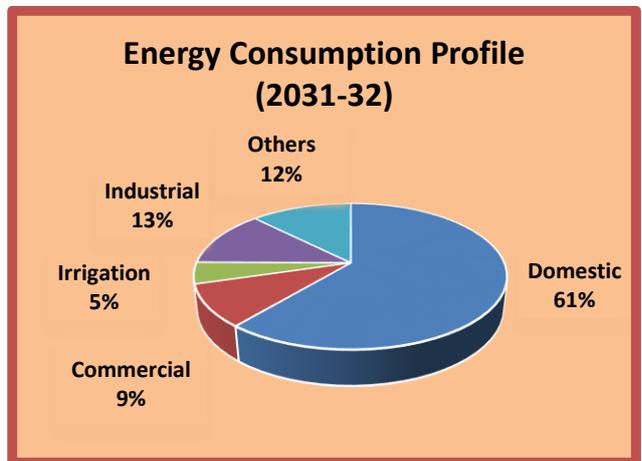
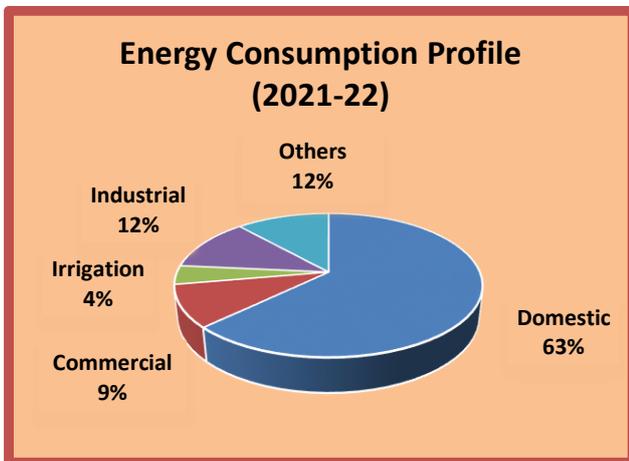
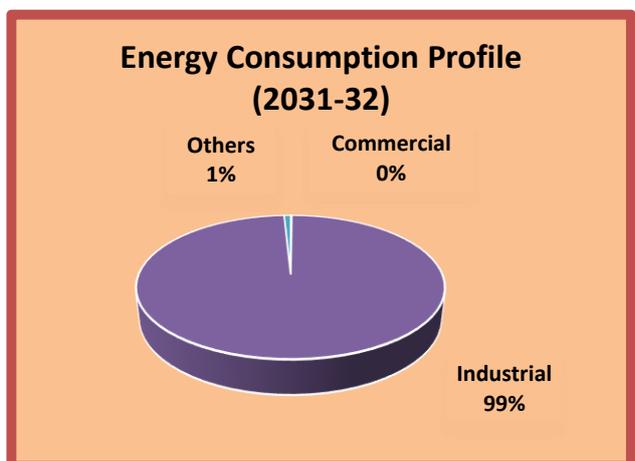
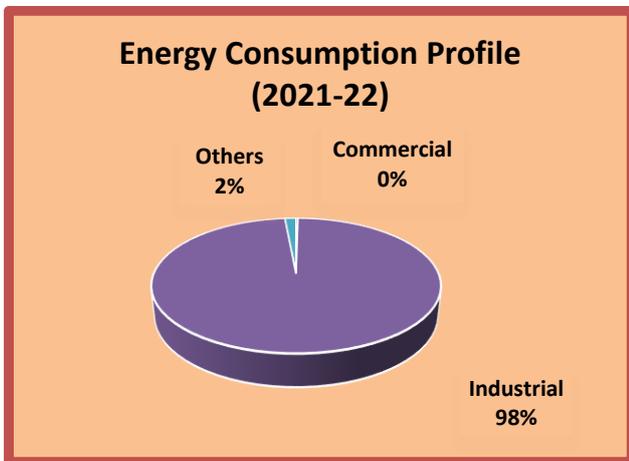


Table 5.69  
**DVC**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	0	0	0	0	0	0	0	0	0	0	0
2. Commercial	41	41	41	42	42	42	42	42	43	43	43
3. Public lighting	0	0	0	0	0	0	0	0	0	0	0
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	0	0	0	0	0	0	0	0	0	0	0
7. HT Industries	15852	16814	17911	19211	20616	22106	23690	25354	27337	28639	29984
8. Railway Traction	239	241	243	245	246	247	248	249	250	250	250
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>16132</b>	<b>17096</b>	<b>18196</b>	<b>19498</b>	<b>20904</b>	<b>22395</b>	<b>23981</b>	<b>25646</b>	<b>27629</b>	<b>28932</b>	<b>30277</b>
T&D losses -MU	498	528	562	602	645	691	740	792	853	893	935
T&D losses -in %	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Energy Requirement - MU	16630	17624	18757	20100	21550	23087	24721	26437	28482	29825	31211
Annual Load Factor - %	61.61	61.95	62.07	62.20	62.32	62.45	62.57	62.70	62.82	62.95	63.07
<b>Peak Demand - MW</b>	<b>3081</b>	<b>3248</b>	<b>3450</b>	<b>3689</b>	<b>3947</b>	<b>4220</b>	<b>4510</b>	<b>4814</b>	<b>5176</b>	<b>5409</b>	<b>5649</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>16630</b>	<b>17624</b>	<b>18757</b>	<b>20100</b>	<b>21550</b>	<b>23087</b>	<b>24721</b>	<b>26437</b>	<b>28482</b>	<b>29825</b>	<b>31211</b>
T&D losses (Ex- Bus) -in %	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial	0.25	0.24	0.23	0.21	0.20	0.19	0.18	0.17	0.15	0.15	0.14
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	98.27	98.35	98.44	98.53	98.62	98.71	98.79	98.86	98.94	98.99	99.03
Others	1.48	1.41	1.34	1.25	1.18	1.10	1.04	0.97	0.90	0.86	0.83
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

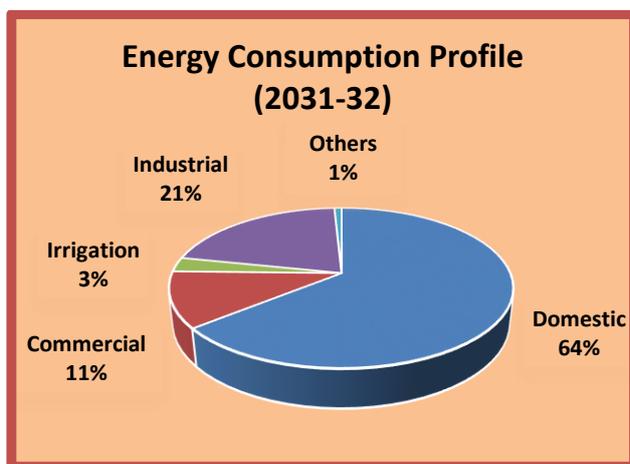
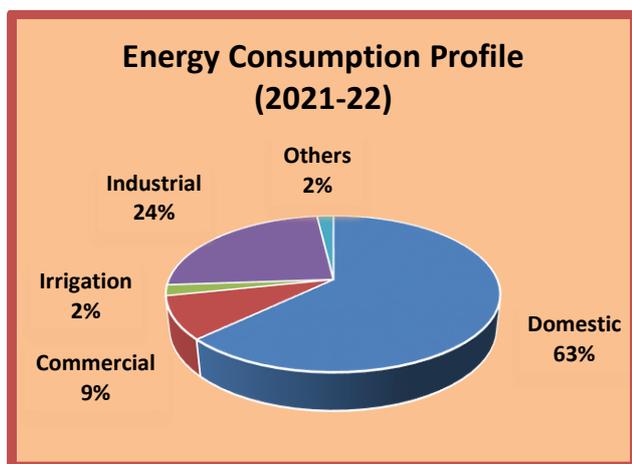


**Table 5.70**  
**Jharkhand - JBVNL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	6407	6930	7483	8069	8687	9339	10024	10745	11502	12298	13086
2. Commercial	903	994	1092	1199	1316	1443	1583	1736	1907	2099	2296
3. Public lighting	50	52	54	57	59	62	64	66	69	71	74
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	225	242	261	283	308	369	407	449	494	542	595
6. LT Industries	230	246	261	278	295	312	329	347	364	380	396
7. HT Industries	2236	2307	2416	2592	2791	3004	3234	3474	3824	3855	3873
8. Railway Traction	144	138	133	127	122	116	111	106	101	96	91
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>10194</b>	<b>10908</b>	<b>11701</b>	<b>12605</b>	<b>13578</b>	<b>14645</b>	<b>15753</b>	<b>16923</b>	<b>18260</b>	<b>19341</b>	<b>20410</b>
T&D losses -MU	3822	3896	3977	4070	4159	4250	4326	4391	4471	4463	4433
T&D losses -in %	27.27	26.32	25.37	24.41	23.45	22.49	21.54	20.60	19.67	18.75	17.84
<b>Energy Requirement - MU</b>	<b>14016</b>	<b>14804</b>	<b>15678</b>	<b>16675</b>	<b>17737</b>	<b>18895</b>	<b>20079</b>	<b>21314</b>	<b>22730</b>	<b>23805</b>	<b>24843</b>
Annual Load Factor - %	68.91	68.59	68.48	68.36	68.25	68.14	68.03	67.92	67.81	67.70	67.59
<b>Peak Demand - MW</b>	<b>2322</b>	<b>2464</b>	<b>2614</b>	<b>2784</b>	<b>2967</b>	<b>3165</b>	<b>3369</b>	<b>3582</b>	<b>3827</b>	<b>4014</b>	<b>4196</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	62.85	63.53	63.95	64.01	63.98	63.77	63.63	63.49	62.99	63.59	64.12
Commercial	8.86	9.11	9.33	9.52	9.69	9.86	10.05	10.26	10.44	10.85	11.25
Irrigation	2.20	2.21	2.23	2.25	2.27	2.52	2.59	2.65	2.70	2.80	2.91
Industrial	24.19	23.40	22.89	22.77	22.72	22.64	22.62	22.58	22.93	21.90	20.92
Others	1.90	1.74	1.60	1.46	1.33	1.22	1.11	1.02	0.93	0.86	0.80
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



**Table 5.71**  
**Jharkhand - TATA STEEL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	294	301	309	316	323	330	337	343	350	356	361
2. Commercial	72	76	79	83	86	90	94	97	101	106	110
3. Public lighting	63	64	64	65	66	66	67	67	67	68	68
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	0	0	0	0	0	0	0	0	0	0	0
7. HT Industries	1889	1918	1978	2090	2218	2354	2500	2650	2886	2935	2981
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>2318</b>	<b>2359</b>	<b>2431</b>	<b>2554</b>	<b>2693</b>	<b>2840</b>	<b>2997</b>	<b>3158</b>	<b>3405</b>	<b>3464</b>	<b>3520</b>
T&D losses -MU	72	73	75	79	83	88	93	98	105	107	109
T&D losses -in %	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>Energy Requirement - MU</b>	<b>2390</b>	<b>2432</b>	<b>2506</b>	<b>2633</b>	<b>2776</b>	<b>2928</b>	<b>3090</b>	<b>3256</b>	<b>3510</b>	<b>3571</b>	<b>3629</b>
Annual Load Factor - %	64.71	64.21	64.15	64.10	64.05	64.00	63.95	63.89	63.84	63.79	63.74
<b>Peak Demand - MW</b>	<b>422</b>	<b>432</b>	<b>446</b>	<b>469</b>	<b>495</b>	<b>522</b>	<b>552</b>	<b>582</b>	<b>628</b>	<b>639</b>	<b>650</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	12.68	12.77	12.70	12.38	12.00	11.62	11.24	10.87	10.27	10.28	10.26
Commercial	3.13	3.21	3.26	3.24	3.20	3.16	3.12	3.08	2.98	3.05	3.11
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	81.49	81.32	81.39	81.85	82.37	82.89	83.42	83.93	84.77	84.72	84.70
Others	2.71	2.69	2.64	2.54	2.43	2.33	2.22	2.12	1.98	1.95	1.92
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

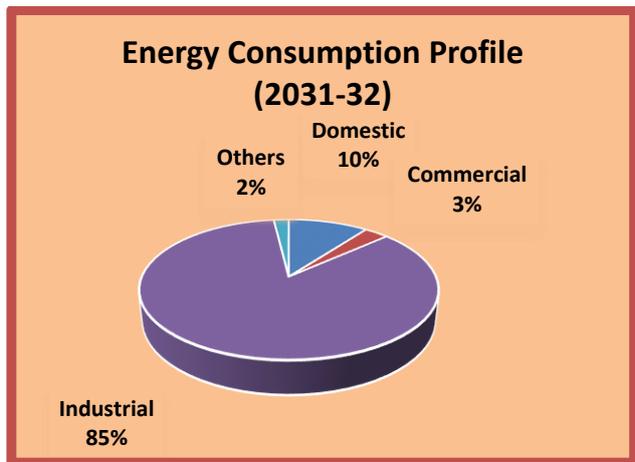
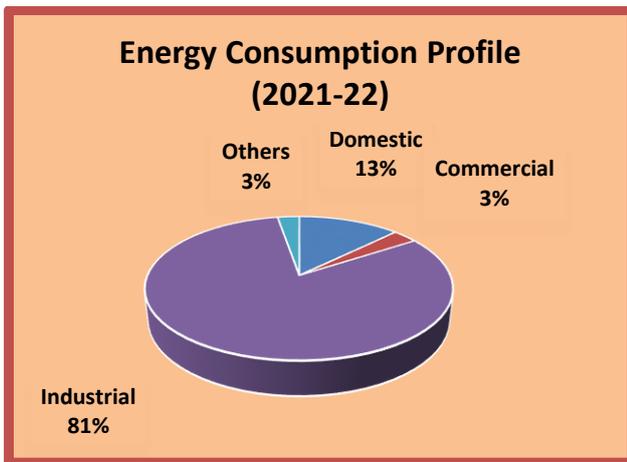


Table 5.72  
**Jharkhand - TSUSIL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	30	31	32	33	34	35	37	38	39	40	41
2. Commercial	8	9	9	10	11	11	12	13	14	14	15
3. Public lighting	0	0	0	0	0	0	0	0	0	0	0
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	13	13	13	13	14	14	14	14	14	15	15
7. HT Industries	604	638	684	751	829	915	1010	1114	1263	1314	1367
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>655</b>	<b>690</b>	<b>738</b>	<b>808</b>	<b>887</b>	<b>975</b>	<b>1073</b>	<b>1178</b>	<b>1330</b>	<b>1384</b>	<b>1438</b>
T&D losses -MU	12	13	14	15	17	18	20	22	25	26	27
T&D losses -in %	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
<b>Energy Requirement - MU</b>	<b>667</b>	<b>703</b>	<b>752</b>	<b>823</b>	<b>904</b>	<b>993</b>	<b>1093</b>	<b>1200</b>	<b>1355</b>	<b>1409</b>	<b>1465</b>
Annual Load Factor - %	51.35	51.07	51.56	53.29	55.37	57.60	60.03	62.53	65.85	66.20	66.75
<b>Peak Demand - MW</b>	<b>148</b>	<b>157</b>	<b>167</b>	<b>176</b>	<b>186</b>	<b>197</b>	<b>208</b>	<b>219</b>	<b>235</b>	<b>243</b>	<b>251</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	4.53	4.46	4.32	4.10	3.86	3.63	3.41	3.21	2.93	2.91	2.87
Commercial	1.25	1.27	1.27	1.24	1.20	1.16	1.12	1.09	1.02	1.05	1.06
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	94.22	94.27	94.41	94.67	94.94	95.21	95.46	95.70	96.04	96.04	96.06
Others	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

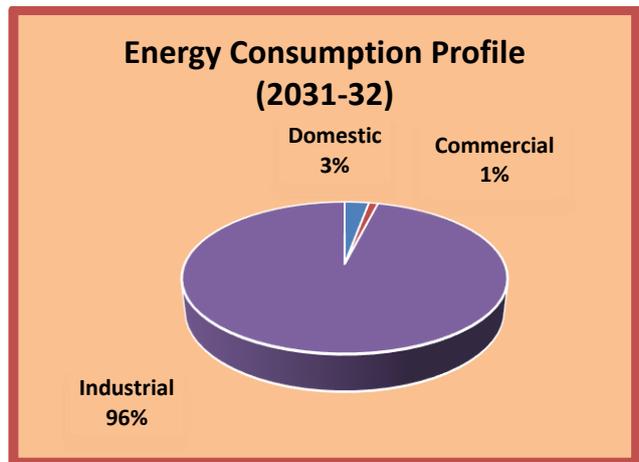
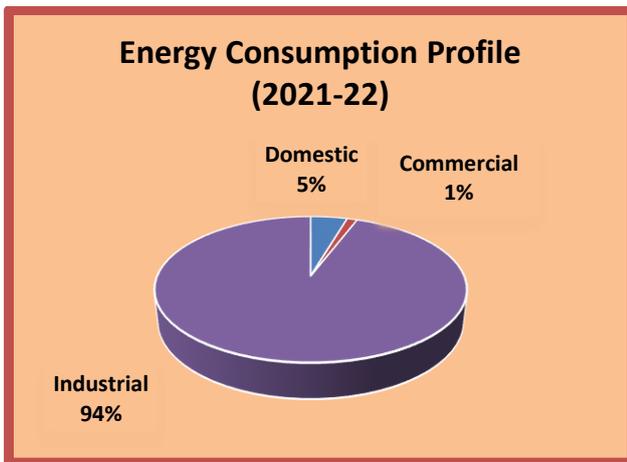


Table 5.73  
**JHARKHAND**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	6731	7262	7824	8418	9044	9704	10398	11126	11891	12695	13489
2. Commercial	984	1078	1181	1292	1413	1544	1688	1847	2022	2219	2420
3. Public lighting	112	116	119	122	125	128	131	133	136	139	141
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	225	242	261	283	308	369	407	449	494	542	595
6. LT Industries	243	259	275	291	308	326	344	361	378	395	411
7. HT Industries	4729	4863	5078	5433	5837	6272	6745	7238	7973	8104	8221
8. Railway Traction	1338	1440	1774	2003	2436	2641	2859	3070	3452	3638	3791
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>14361</b>	<b>15259</b>	<b>16512</b>	<b>17842</b>	<b>19472</b>	<b>20984</b>	<b>22571</b>	<b>24224</b>	<b>26346</b>	<b>27732</b>	<b>29068</b>
T&D losses -MU	3906	3982	4066	4164	4259	4356	4438	4511	4601	4596	4569
T&D losses -in %	21.38	20.70	19.76	18.92	17.95	17.19	16.43	15.70	14.87	14.22	13.58
Energy Requirement - MU	18266	19242	20577	22006	23731	25341	27010	28734	30947	32328	33637
Annual Load Factor - %	73.55	73.37	74.27	74.72	75.75	75.96	76.18	76.33	76.85	76.88	76.85
<b>Peak Demand - MW</b>	<b>2835</b>	<b>2994</b>	<b>3163</b>	<b>3362</b>	<b>3576</b>	<b>3808</b>	<b>4048</b>	<b>4297</b>	<b>4597</b>	<b>4800</b>	<b>4997</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>18355</b>	<b>19334</b>	<b>20677</b>	<b>22112</b>	<b>23846</b>	<b>25463</b>	<b>27140</b>	<b>28873</b>	<b>31096</b>	<b>32484</b>	<b>33799</b>
T&D losses (Ex- Bus) -in %	21.76	21.08	20.14	19.31	18.34	17.59	16.83	16.10	15.28	14.63	14.00

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	46.87	47.59	47.38	47.18	46.45	46.24	46.07	45.93	45.13	45.78	46.40
Commercial	6.85	7.07	7.15	7.24	7.26	7.36	7.48	7.62	7.67	8.00	8.33
Irrigation	1.56	1.58	1.58	1.59	1.58	1.76	1.80	1.85	1.87	1.95	2.05
Industrial	34.62	33.57	32.42	32.08	31.56	31.44	31.40	31.37	31.70	30.65	29.70
Others	10.10	10.20	11.46	11.91	13.15	13.19	13.25	13.22	13.62	13.62	13.53
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

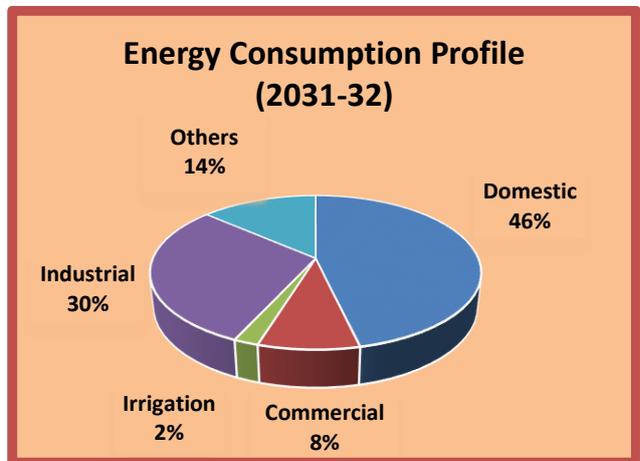
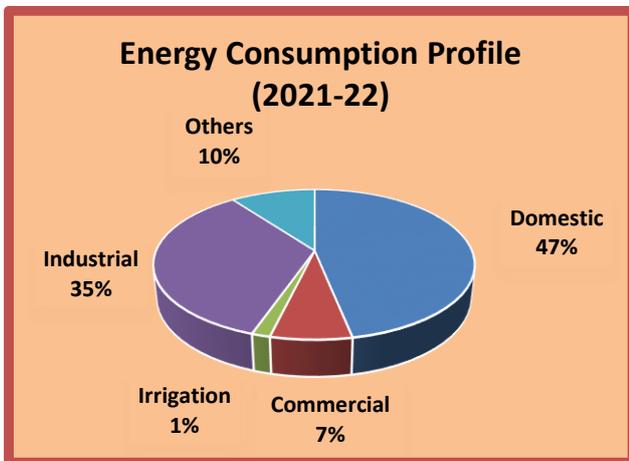


Table 5.74  
**Odisha - TPCODL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	3354	3717	4005	4311	4636	4982	5347	5734	6138	6556	6925
2. Commercial	1335	1469	1560	1656	1757	1862	1973	2089	2210	2338	2446
3. Public lighting	51	53	56	59	61	64	67	70	73	77	80
4. Public Water Works	167	178	189	201	213	227	240	254	269	284	300
5. Irrigation	53	57	60	64	68	72	77	81	86	91	96
6. LT Industries	151	155	159	162	166	169	171	173	174	177	180
7. HT Industries	1129	1149	1205	1325	1465	1615	1778	1945	2204	2243	2287
8. Railway Traction	405	431	459	487	517	548	580	614	649	685	723
9. Bulk Supply	65	69	73	77	82	86	91	96	101	106	112
10. Others	150	160	160	160	161	161	161	161	161	161	162
<b>Total Energy Consumption</b>	<b>6860</b>	<b>7438</b>	<b>7926</b>	<b>8503</b>	<b>9126</b>	<b>9786</b>	<b>10486</b>	<b>11217</b>	<b>12066</b>	<b>12719</b>	<b>13310</b>
T&D losses -MU	2266	2350	2394	2452	2512	2568	2621	2668	2730	2734	2717
T&D losses -in %	24.83	24.01	23.20	22.39	21.58	20.78	20.00	19.22	18.45	17.69	16.95
<b>Energy Requirement - MU</b>	<b>9126</b>	<b>9788</b>	<b>10320</b>	<b>10955</b>	<b>11637</b>	<b>12354</b>	<b>13107</b>	<b>13886</b>	<b>14795</b>	<b>15454</b>	<b>16027</b>
Annual Load Factor - %	62.60	62.45	62.42	62.38	62.34	62.31	62.27	62.24	62.20	62.16	62.13
<b>Peak Demand - MW</b>	<b>1664</b>	<b>1789</b>	<b>1887</b>	<b>2005</b>	<b>2131</b>	<b>2263</b>	<b>2403</b>	<b>2547</b>	<b>2715</b>	<b>2838</b>	<b>2945</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	48.89	49.98	50.52	50.70	50.80	50.91	51.00	51.11	50.87	51.55	52.03
Commercial	19.46	19.75	19.69	19.48	19.25	19.03	18.81	18.62	18.32	18.38	18.38
Irrigation	0.78	0.76	0.76	0.76	0.75	0.74	0.73	0.73	0.71	0.72	0.72
Industrial	18.66	17.52	17.21	17.49	17.87	18.23	18.59	18.88	19.71	19.03	18.53
Others	12.21	11.99	11.82	11.58	11.33	11.09	10.87	10.66	10.39	10.33	10.34
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

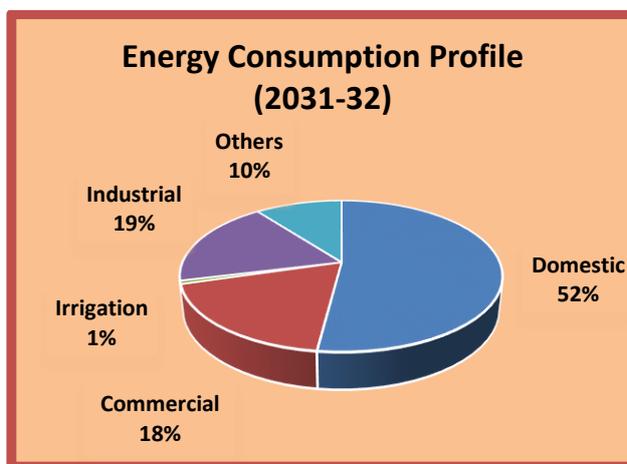
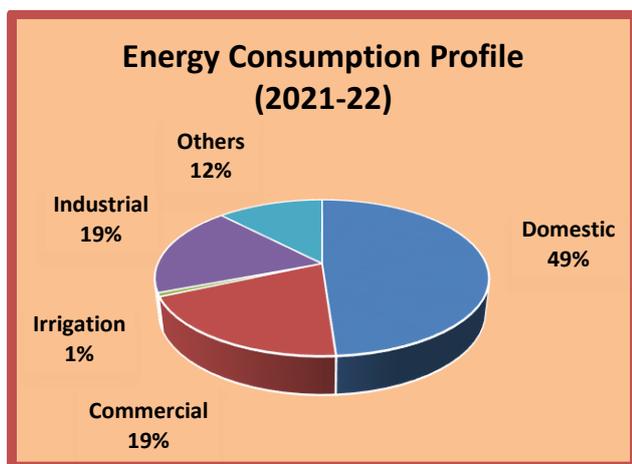


Table 5.75  
**Odisha - TPNODL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1758	1876	2001	2132	2269	2414	2564	2721	2883	3047	3183
2. Commercial	455	495	538	585	635	690	749	813	881	955	1022
3. Public lighting	19	21	22	24	26	28	30	33	35	38	41
4. Public Water Works	45	49	54	58	63	68	74	80	87	93	101
5. Irrigation	109	117	124	132	141	150	159	168	179	189	200
6. LT Industries	65	66	67	69	70	71	72	73	73	73	73
7. HT Industries	1740	1802	1919	2126	2364	2620	2898	3185	3609	3669	3732
8. Railway Traction	426	450	475	501	528	556	585	614	645	677	709
9. Bulk Supply	93	101	110	119	129	140	151	164	177	191	206
10. Others	1490	1661	1682	1703	1721	1738	1754	1768	1781	1791	1800
<b>Total Energy Consumption</b>	<b>6199</b>	<b>6638</b>	<b>6992</b>	<b>7448</b>	<b>7947</b>	<b>8475</b>	<b>9036</b>	<b>9619</b>	<b>10348</b>	<b>10723</b>	<b>11068</b>
T&D losses -MU	1272	1358	1426	1511	1603	1697	1794	1891	2012	2060	2099
T&D losses -in %	17.02	16.99	16.94	16.87	16.78	16.68	16.56	16.43	16.28	16.12	15.94
<b>Energy Requirement - MU</b>	<b>7470</b>	<b>7996</b>	<b>8418</b>	<b>8959</b>	<b>9550</b>	<b>10172</b>	<b>10830</b>	<b>11510</b>	<b>12360</b>	<b>12784</b>	<b>13166</b>
Annual Load Factor - %	78.80	78.88	78.85	78.81	78.78	78.74	78.71	78.67	78.64	78.60	78.57
<b>Peak Demand - MW</b>	<b>1082</b>	<b>1157</b>	<b>1219</b>	<b>1298</b>	<b>1384</b>	<b>1475</b>	<b>1571</b>	<b>1670</b>	<b>1794</b>	<b>1857</b>	<b>1913</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	28.36	28.27	28.62	28.62	28.56	28.48	28.38	28.29	27.86	28.41	28.76
Commercial	7.33	7.45	7.70	7.85	7.99	8.14	8.29	8.45	8.52	8.91	9.24
Irrigation	1.76	1.76	1.78	1.78	1.77	1.76	1.76	1.75	1.73	1.76	1.81
Industrial	29.11	28.15	28.41	29.46	30.63	31.76	32.87	33.87	35.58	34.90	34.38
Others	33.44	34.37	33.51	32.29	31.05	29.86	28.71	27.65	26.33	26.02	25.81
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

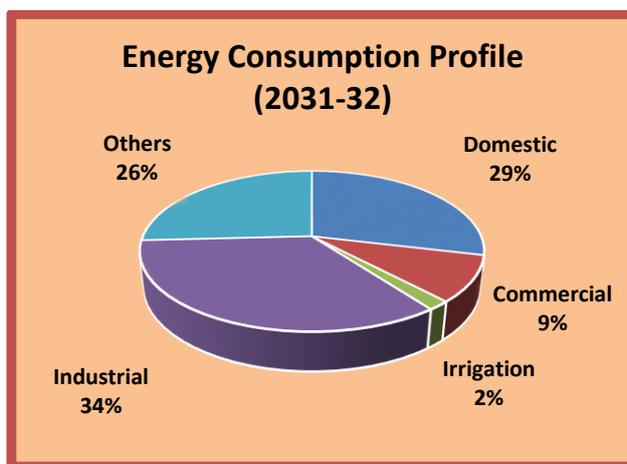
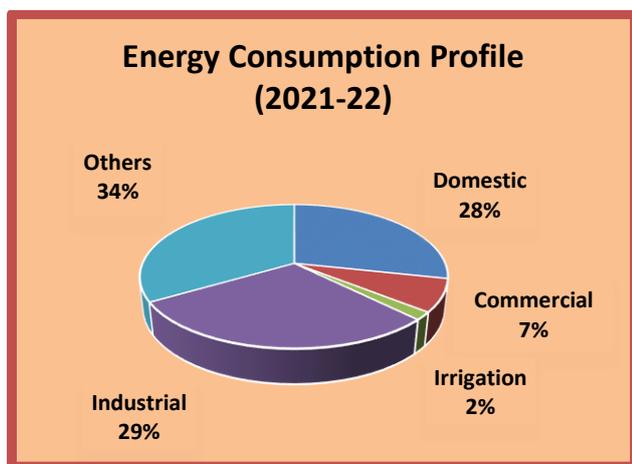


Table 5.76  
**Odisha - TPSODL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1520	1599	1680	1764	1850	1938	2028	2119	2209	2295	2354
2. Commercial	306	317	329	341	354	367	381	397	414	434	449
3. Public lighting	34	36	38	41	43	46	48	51	54	57	60
4. Public Water Works	68	71	75	79	83	86	90	95	99	103	107
5. Irrigation	101	109	117	126	135	144	154	165	176	188	200
6. LT Industries	37	38	38	39	40	40	41	41	41	41	41
7. HT Industries	507	527	563	628	704	786	877	972	1114	1145	1171
8. Railway Traction	193	197	201	204	207	210	213	216	219	221	223
9. Bulk Supply	96	102	108	115	123	130	138	147	155	164	173
10. Others	180	190	200	210	221	232	243	255	267	279	292
<b>Total Energy Consumption</b>	<b>3042</b>	<b>3186</b>	<b>3350</b>	<b>3546</b>	<b>3758</b>	<b>3980</b>	<b>4214</b>	<b>4456</b>	<b>4747</b>	<b>4928</b>	<b>5071</b>
T&D losses -MU	1009	1005	1004	1009	1015	1019	1022	1023	1031	1012	984
T&D losses -in %	24.91	23.98	23.06	22.16	21.26	20.38	19.52	18.67	17.85	17.04	16.25
<b>Energy Requirement - MU</b>	<b>4052</b>	<b>4191</b>	<b>4354</b>	<b>4555</b>	<b>4773</b>	<b>4999</b>	<b>5236</b>	<b>5480</b>	<b>5778</b>	<b>5940</b>	<b>6055</b>
Annual Load Factor - %	66.26	65.98	65.93	65.88	65.83	65.77	65.72	65.67	65.62	65.57	65.52
<b>Peak Demand - MW</b>	<b>698</b>	<b>725</b>	<b>754</b>	<b>789</b>	<b>828</b>	<b>868</b>	<b>910</b>	<b>952</b>	<b>1005</b>	<b>1034</b>	<b>1055</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	49.97	50.19	50.16	49.74	49.23	48.69	48.12	47.54	46.53	46.58	46.42
Commercial	10.06	9.96	9.82	9.62	9.41	9.22	9.04	8.90	8.73	8.82	8.86
Irrigation	3.34	3.42	3.50	3.54	3.58	3.62	3.66	3.70	3.71	3.81	3.95
Industrial	17.89	17.72	17.95	18.81	19.78	20.77	21.77	22.73	24.32	24.06	23.89
Others	18.75	18.70	18.57	18.29	18.00	17.70	17.40	17.12	16.71	16.73	16.88
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

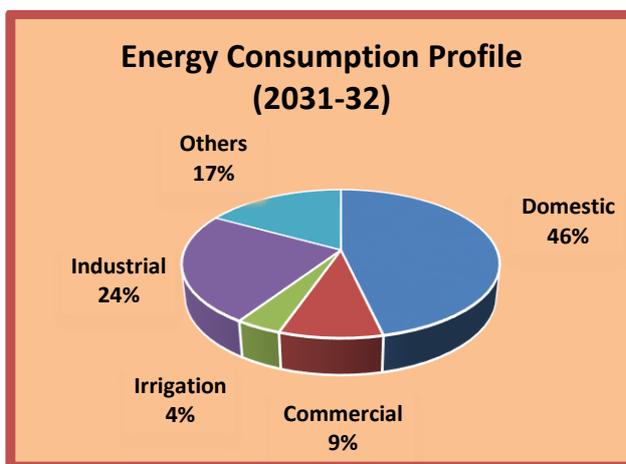
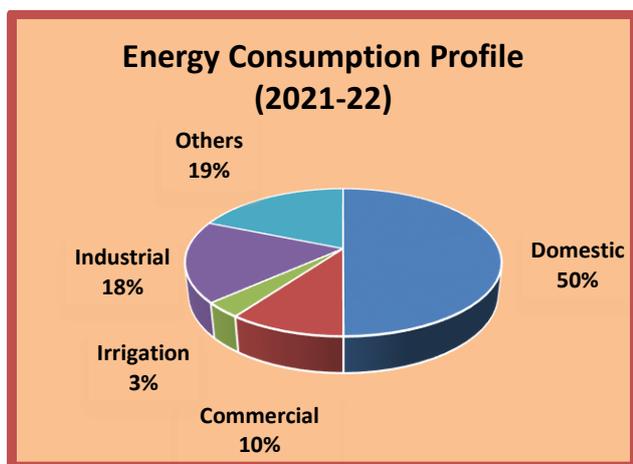


Table 5.77  
**Odisha - TPWODL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	1907	2330	2478	2633	2795	2965	3141	3324	3512	3705	3873
2. Commercial	516	559	605	654	707	764	825	890	959	1033	1101
3. Public lighting	41	43	45	47	50	52	55	57	60	63	66
4. Public Water Works	73	77	81	85	88	92	97	101	105	109	114
5. Irrigation	467	531	603	684	775	878	993	1122	1267	1430	1612
6. LT Industries	86	89	93	97	100	104	107	110	113	114	115
7. HT Industries	2839	3190	3447	3868	4359	4898	5493	6125	7037	7229	7375
8. Railway Traction	557	628	706	795	893	1002	1124	1260	1411	1578	1764
9. Bulk Supply	75	79	83	88	92	97	101	106	111	116	122
10. Others	1795	1797	1799	1800	1802	1804	1806	1808	1810	1811	1813
<b>Total Energy Consumption</b>	<b>8356</b>	<b>9323</b>	<b>9940</b>	<b>10751</b>	<b>11662</b>	<b>12655</b>	<b>13741</b>	<b>14904</b>	<b>16386</b>	<b>17190</b>	<b>17954</b>
T&D losses -MU	1918	2008	2009	2038	2072	2105	2140	2171	2231	2187	2132
T&D losses -in %	18.66	17.72	16.81	15.93	15.08	14.26	13.47	12.71	11.99	11.29	10.62
<b>Energy Requirement - MU</b>	<b>10274</b>	<b>11331</b>	<b>11949</b>	<b>12788</b>	<b>13734</b>	<b>14761</b>	<b>15881</b>	<b>17075</b>	<b>18617</b>	<b>19376</b>	<b>20086</b>
Annual Load Factor - %	64.95	64.71	64.66	64.60	64.55	64.49	64.44	64.38	64.33	64.27	64.22
<b>Peak Demand - MW</b>	<b>1806</b>	<b>1999</b>	<b>2110</b>	<b>2260</b>	<b>2429</b>	<b>2613</b>	<b>2813</b>	<b>3027</b>	<b>3304</b>	<b>3441</b>	<b>3570</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	22.82	25.00	24.93	24.49	23.97	23.43	22.86	22.30	21.44	21.55	21.57
Commercial	6.17	5.99	6.08	6.08	6.06	6.03	6.00	5.97	5.86	6.01	6.13
Irrigation	5.59	5.70	6.07	6.36	6.65	6.94	7.23	7.53	7.73	8.32	8.98
Industrial	35.00	35.18	35.61	36.88	38.24	39.52	40.75	41.84	43.64	42.72	41.72
Others	30.41	28.14	27.30	26.18	25.08	24.08	23.16	22.36	21.34	21.40	21.60
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

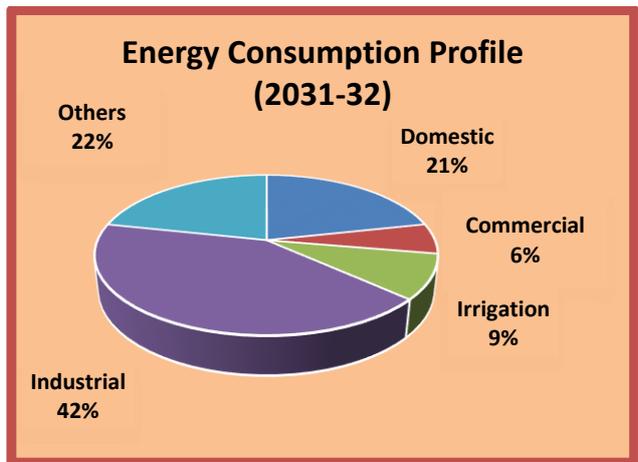
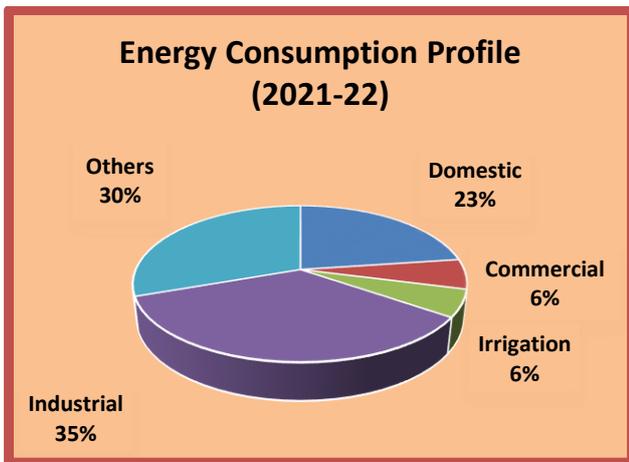


Table 5.78  
**ODISHA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	8539	9523	10164	10839	11551	12298	13080	13897	14741	15604	16336
2. Commercial	2611	2840	3032	3236	3452	3682	3927	4188	4466	4761	5018
3. Public lighting	144	152	161	171	180	190	201	212	223	234	246
4. Public Water Works	354	375	398	422	448	474	501	530	559	590	622
5. Irrigation	731	814	905	1006	1119	1244	1383	1537	1708	1898	2108
6. LT Industries	338	348	358	367	376	384	391	397	400	405	408
7. HT Industries	6216	6668	7134	7947	8892	9920	11046	12227	13963	14286	14565
8. Railway Traction	1581	1706	1841	1986	2145	2316	2502	2704	2923	3161	3419
9. Bulk Supply	328	351	374	399	425	453	482	512	544	578	613
10. Others	10776	12969	12086	11294	10584	9946	9374	8861	8400	7987	7616
<b>Total Energy Consumption</b>	<b>31619</b>	<b>35745</b>	<b>36453</b>	<b>37668</b>	<b>39171</b>	<b>40907</b>	<b>42888</b>	<b>45065</b>	<b>47928</b>	<b>49504</b>	<b>50952</b>
T&D losses -MU	6464	7022	6833	7010	7200	7389	7576	7754	8004	7994	7932
T&D losses -in %	16.97	16.42	15.78	15.69	15.53	15.30	15.01	14.68	14.31	13.90	13.47
Energy Requirement - MU	38083	42767	43285	44679	46372	48296	50464	52818	55933	57497	58883
Annual Load Factor - %	77.01	75.22	74.47	73.73	72.99	72.26	71.54	70.82	70.11	69.41	68.72
<b>Peak Demand - MW</b>	<b>5645</b>	<b>6490</b>	<b>6635</b>	<b>6918</b>	<b>7252</b>	<b>7630</b>	<b>8053</b>	<b>8514</b>	<b>9107</b>	<b>9456</b>	<b>9782</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>38344</b>	<b>43060</b>	<b>43582</b>	<b>44985</b>	<b>46689</b>	<b>48627</b>	<b>50810</b>	<b>53180</b>	<b>56316</b>	<b>57891</b>	<b>59286</b>
T&D losses (Ex- Bus) -in %	17.54	16.99	16.36	16.26	16.10	15.87	15.59	15.26	14.89	14.49	14.06

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	27.01	26.64	27.88	28.78	29.49	30.06	30.50	30.84	30.76	31.52	32.06
Commercial	8.26	7.94	8.32	8.59	8.81	9.00	9.16	9.29	9.32	9.62	9.85
Irrigation	2.31	2.28	2.48	2.67	2.86	3.04	3.22	3.41	3.56	3.83	4.14
Industrial	20.73	19.63	20.55	22.07	23.66	25.19	26.67	28.01	29.97	29.68	29.39
Others	41.69	43.51	40.77	37.89	35.18	32.71	30.45	28.44	26.39	25.35	24.56
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

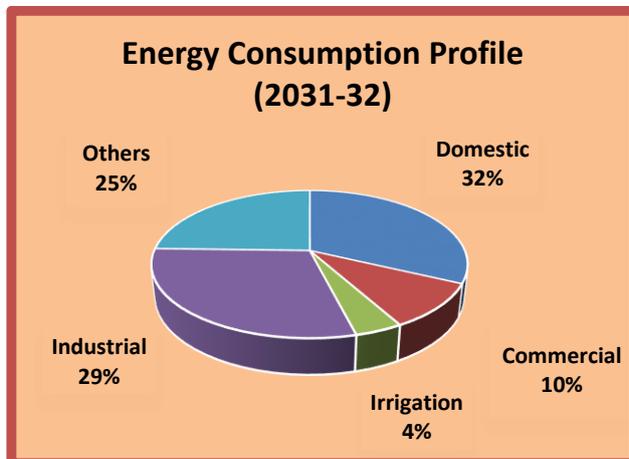
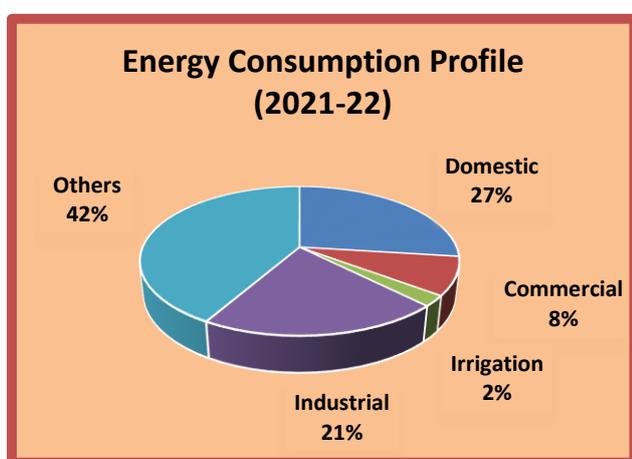


Table 5.79  
**SIKKIM**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	117	124	131	138	146	154	163	172	181	190	200
2. Commercial	39	41	44	46	48	51	53	56	58	61	64
3. Public lighting	0	0	0	0	0	0	0	0	0	0	0
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	2	2	2	3	3	3	3	3	3	3	4
7. HT Industries	253	277	302	330	360	393	428	465	506	549	596
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	30	31	33	35	36	38	40	42	44	46	48
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>441</b>	<b>476</b>	<b>512</b>	<b>552</b>	<b>594</b>	<b>639</b>	<b>687</b>	<b>738</b>	<b>792</b>	<b>850</b>	<b>911</b>
T&D losses -MU	165	165	165	166	166	166	166	165	165	164	164
T&D losses -in %	27.17	25.76	24.40	23.09	21.82	20.61	19.44	18.31	17.24	16.20	15.22
Energy Requirement - MU	605	641	678	718	760	805	853	903	957	1014	1075
Annual Load Factor - %	51.76	51.68	51.60	51.51	51.43	51.35	51.27	51.19	51.10	51.02	50.94
<b>Peak Demand - MW</b>	<b>134</b>	<b>141</b>	<b>150</b>	<b>159</b>	<b>169</b>	<b>179</b>	<b>190</b>	<b>201</b>	<b>214</b>	<b>227</b>	<b>241</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>616</b>	<b>651</b>	<b>689</b>	<b>730</b>	<b>773</b>	<b>819</b>	<b>867</b>	<b>919</b>	<b>974</b>	<b>1032</b>	<b>1093</b>
T&D losses (Ex- Bus) -in %	28.39	27.01	25.67	24.38	23.14	21.94	20.79	19.68	18.63	17.61	16.64

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	26.46	26.00	25.54	25.09	24.63	24.17	23.72	23.27	22.82	22.37	21.92
Commercial	8.90	8.70	8.50	8.30	8.11	7.91	7.72	7.53	7.35	7.16	6.98
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	57.84	58.66	59.47	60.28	61.09	61.88	62.68	63.46	64.24	65.02	65.78
Others	6.79	6.64	6.48	6.33	6.18	6.03	5.88	5.74	5.59	5.45	5.31
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

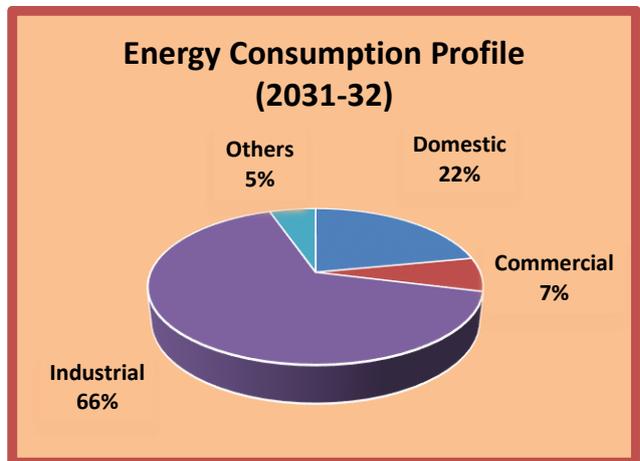
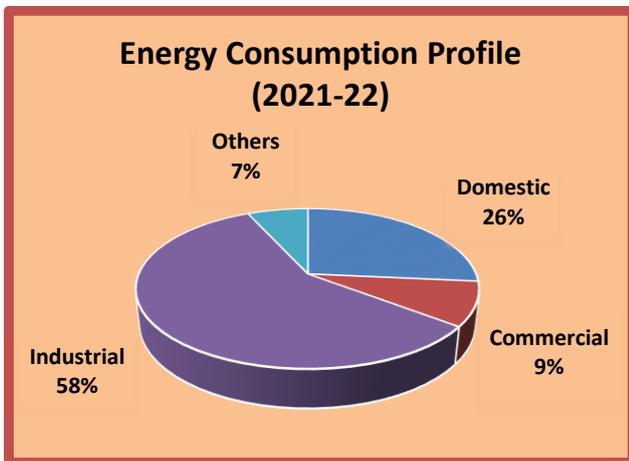


Table 5.80  
**West Bengal - CESC**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	4626	4903	5087	5272	5460	5651	5844	6042	6246	6460	6660
2. Commercial	1743	1871	1901	1929	1956	1983	2009	2036	2065	2098	2125
3. Public lighting	282	295	309	323	338	352	368	383	399	415	431
4. Public Water Works	482	501	521	542	562	583	604	625	646	668	689
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	772	790	807	824	840	855	870	883	894	904	911
7. HT Industries	1324	1354	1410	1508	1619	1736	1862	1991	2181	2216	2247
8. Railway Traction	196	206	217	228	240	252	264	277	290	303	317
9. Bulk Supply	147	152	157	163	168	173	179	184	190	195	200
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>9569</b>	<b>10073</b>	<b>10409</b>	<b>10789</b>	<b>11183</b>	<b>11586</b>	<b>12000</b>	<b>12421</b>	<b>12912</b>	<b>13259</b>	<b>13580</b>
T&D losses -MU	1356	1416	1451	1489	1526	1562	1597	1629	1668	1684	1695
T&D losses -in %	12.41	12.33	12.23	12.13	12.01	11.88	11.74	11.60	11.44	11.27	11.09
<b>Energy Requirement - MU</b>	<b>10925</b>	<b>11489</b>	<b>11860</b>	<b>12278</b>	<b>12710</b>	<b>13148</b>	<b>13597</b>	<b>14051</b>	<b>14580</b>	<b>14943</b>	<b>15275</b>
Annual Load Factor - %	56.04	55.83	55.78	55.72	55.67	55.61	55.56	55.50	55.45	55.39	55.34
<b>Peak Demand - MW</b>	<b>2226</b>	<b>2349</b>	<b>2427</b>	<b>2515</b>	<b>2606</b>	<b>2699</b>	<b>2794</b>	<b>2890</b>	<b>3002</b>	<b>3080</b>	<b>3151</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	48.34	48.68	48.86	48.87	48.82	48.77	48.70	48.64	48.38	48.72	49.04
Commercial	18.21	18.58	18.26	17.88	17.49	17.11	16.74	16.39	16.00	15.82	15.65
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	21.89	21.28	21.30	21.62	21.99	22.37	22.76	23.13	23.82	23.53	23.26
Others	11.55	11.46	11.57	11.64	11.70	11.75	11.79	11.83	11.81	11.92	12.06
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

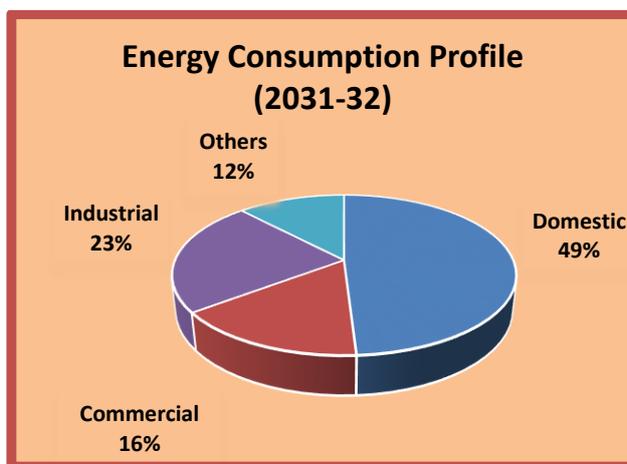
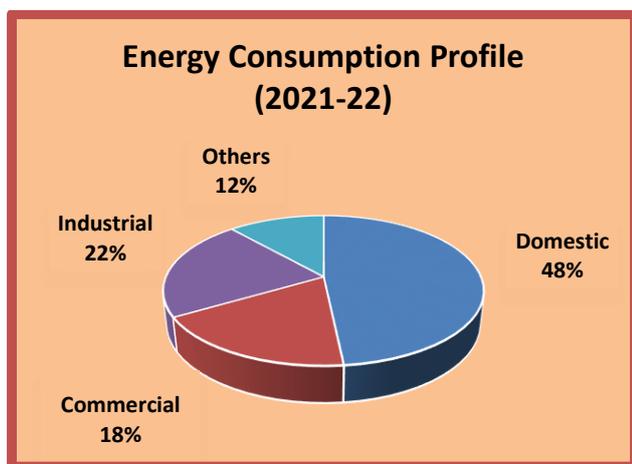


Table 5.81  
**West Bengal - IPCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	13	15	17	20	22	26	29	33	38	43	49
2. Commercial	50	54	58	62	66	71	76	81	86	92	98
3. Public lighting	0	0	0	1	1	1	1	2	3	4	5
4. Public Water Works	15	16	17	17	18	19	19	20	21	21	22
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	8	9	12	14	17	21	26	32	39	47	57
7. HT Industries	1013	1298	1415	1641	1939	2246	2596	2748	2918	2937	2972
8. Railway Traction	40	40	155	155	155	155	155	155	155	155	155
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>1140</b>	<b>1432</b>	<b>1673</b>	<b>1910</b>	<b>2219</b>	<b>2538</b>	<b>2903</b>	<b>3071</b>	<b>3259</b>	<b>3300</b>	<b>3359</b>
T&D losses -MU	71	89	104	118	137	156	178	188	199	201	204
T&D losses -in %	5.89	5.87	5.85	5.84	5.82	5.81	5.79	5.78	5.76	5.75	5.73
<b>Energy Requirement - MU</b>	<b>1211</b>	<b>1522</b>	<b>1777</b>	<b>2028</b>	<b>2356</b>	<b>2694</b>	<b>3082</b>	<b>3259</b>	<b>3458</b>	<b>3501</b>	<b>3563</b>
Annual Load Factor - %	67.31	66.70	66.64	66.59	66.53	66.48	66.42	66.37	66.31	66.26	66.20
<b>Peak Demand - MW</b>	<b>205</b>	<b>260</b>	<b>304</b>	<b>348</b>	<b>404</b>	<b>463</b>	<b>530</b>	<b>561</b>	<b>595</b>	<b>603</b>	<b>614</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	1.17	1.06	1.04	1.03	1.01	1.01	1.00	1.08	1.16	1.30	1.45
Commercial	4.41	3.77	3.46	3.25	2.99	2.80	2.62	2.64	2.65	2.79	2.92
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	89.55	91.25	85.23	86.67	88.17	89.31	90.33	90.52	90.72	90.45	90.20
Others	4.86	3.92	10.28	9.04	7.82	6.88	6.05	5.76	5.47	5.46	5.42
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

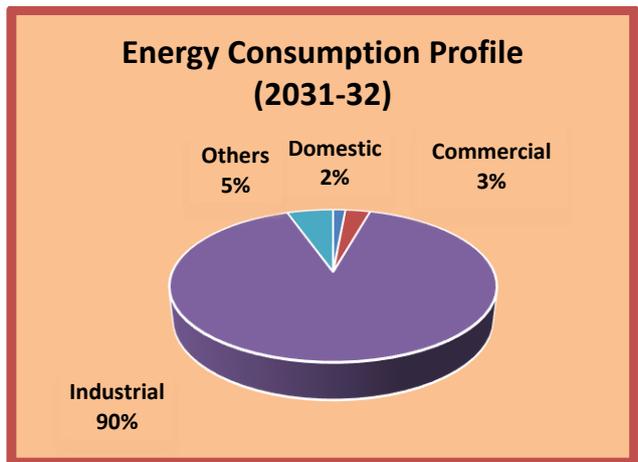
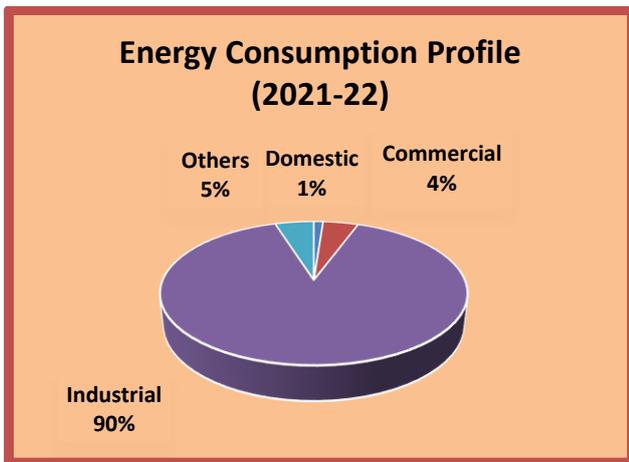


Table 5.82  
**West Bengal - WBSEDCL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	13608	15156	16197	17294	18452	19674	20964	22332	23789	25354	26938
2. Commercial	4673	5315	5700	6109	6542	7004	7496	8023	8593	9215	9855
3. Public lighting	543	589	637	690	746	805	869	937	1009	1085	1167
4. Public Water Works	582	625	671	719	770	824	881	941	1004	1070	1140
5. Irrigation	1395	1413	1429	1445	1459	1475	1487	1496	1506	1514	1520
6. LT Industries	1528	1694	1765	1838	1910	1983	2056	2128	2199	2267	2331
7. HT Industries	8822	10329	11100	12215	13475	14839	16324	17898	20041	20725	21405
8. Railway Traction	1034	1115	1148	1180	1212	1243	1274	1305	1335	1365	1393
9. Bulk Supply	0	0	0	0	0	0	0	0	0	0	0
10. Others	167	493	569	655	754	867	996	1144	1312	1504	1722
<b>Total Energy Consumption</b>	<b>32352</b>	<b>36730</b>	<b>39216</b>	<b>42145</b>	<b>45321</b>	<b>48714</b>	<b>52348</b>	<b>56205</b>	<b>60788</b>	<b>64099</b>	<b>67471</b>
T&D losses -MU	9262	10122	10392	10729	11074	11413	11749	12073	12486	12578	12637
T&D losses -in %	22.26	21.60	20.95	20.29	19.64	18.98	18.33	17.68	17.04	16.40	15.78
<b>Energy Requirement - MU</b>	<b>41614</b>	<b>46851</b>	<b>49609</b>	<b>52874</b>	<b>56395</b>	<b>60127</b>	<b>64097</b>	<b>68278</b>	<b>73274</b>	<b>76677</b>	<b>80108</b>
Annual Load Factor - %	64.88	64.59	64.52	64.46	64.39	64.33	64.27	64.20	64.14	64.07	64.01
<b>Peak Demand - MW</b>	<b>7322</b>	<b>8281</b>	<b>8777</b>	<b>9364</b>	<b>9998</b>	<b>10670</b>	<b>11386</b>	<b>12140</b>	<b>13042</b>	<b>13661</b>	<b>14287</b>

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	42.06	41.26	41.30	41.04	40.71	40.39	40.05	39.73	39.13	39.55	39.93
Commercial	14.44	14.47	14.54	14.49	14.44	14.38	14.32	14.27	14.14	14.38	14.61
Irrigation	4.31	3.85	3.64	3.43	3.22	3.03	2.84	2.66	2.48	2.36	2.25
Industrial	31.99	32.73	32.81	33.34	33.95	34.53	35.11	35.63	36.59	35.87	35.18
Others	7.19	7.68	7.71	7.70	7.68	7.68	7.68	7.70	7.67	7.84	8.04
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

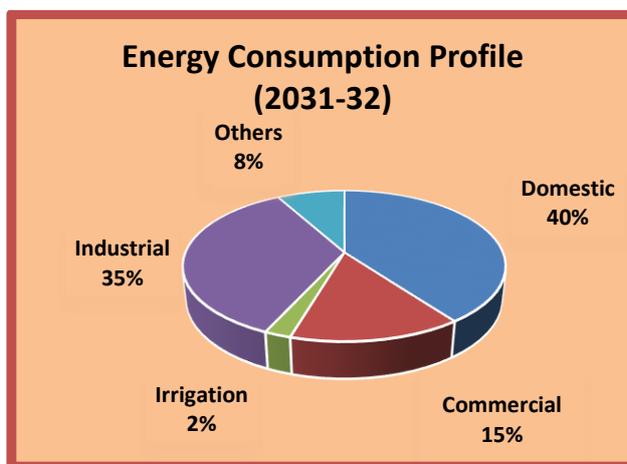
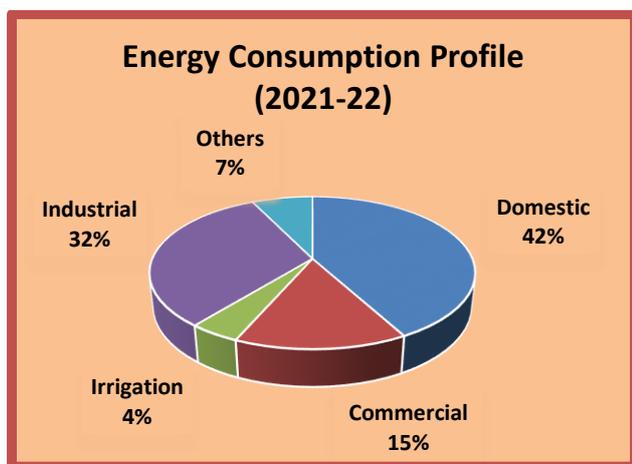


Table 5.83  
**WEST BENGAL**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	18248	20074	21301	22586	23935	25350	26838	28407	30074	31857	33646
2. Commercial	6466	7241	7659	8100	8565	9058	9581	10141	10745	11405	12078
3. Public lighting	825	884	947	1013	1084	1159	1238	1322	1410	1504	1603
4. Public Water Works	1079	1143	1209	1278	1350	1426	1504	1586	1671	1759	1851
5. Irrigation	1395	1413	1429	1445	1459	1475	1487	1496	1506	1514	1520
6. LT Industries	2307	2493	2584	2676	2768	2860	2952	3043	3131	3218	3300
7. HT Industries	11159	12982	13925	15364	17033	18820	20783	22637	25141	25879	26625
8. Railway Traction	1270	1361	1520	1563	1607	1650	1694	1737	1780	1823	1866
9. Bulk Supply	147	152	157	163	168	173	179	184	190	195	200
10. Others	168	493	569	655	754	867	997	1144	1312	1504	1722
<b>Total Energy Consumption</b>	<b>43061</b>	<b>48235</b>	<b>51299</b>	<b>54844</b>	<b>58723</b>	<b>62838</b>	<b>67251</b>	<b>71697</b>	<b>76960</b>	<b>80657</b>	<b>84410</b>
T&D losses -MU	10689	11627	11947	12337	12737	13132	13524	13891	14353	14464	14536
T&D losses -in %	19.89	19.42	18.89	18.36	17.82	17.29	16.74	16.23	15.72	15.21	14.69
Energy Requirement - MU	53750	59863	63246	67180	71461	75970	80776	85588	91313	95121	98946
Annual Load Factor - %	67.50	67.33	67.31	67.30	67.29	67.28	67.26	67.24	67.22	67.18	67.14
<b>Peak Demand - MW</b>	<b>9090</b>	<b>10150</b>	<b>10726</b>	<b>11395</b>	<b>12123</b>	<b>12891</b>	<b>13708</b>	<b>14530</b>	<b>15507</b>	<b>16164</b>	<b>16824</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>54020</b>	<b>60163</b>	<b>63564</b>	<b>67518</b>	<b>71820</b>	<b>76352</b>	<b>81182</b>	<b>86018</b>	<b>91771</b>	<b>95599</b>	<b>99443</b>
T&D losses (Ex- Bus) -in %	20.29	19.83	19.30	18.77	18.24	17.70	17.16	16.65	16.14	15.63	15.12

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	42.38	41.62	41.52	41.18	40.76	40.34	39.91	39.62	39.08	39.50	39.86
Commercial	15.01	15.01	14.93	14.77	14.59	14.41	14.25	14.14	13.96	14.14	14.31
Irrigation	3.24	2.93	2.79	2.64	2.48	2.35	2.21	2.09	1.96	1.88	1.80
Industrial	31.27	32.08	32.18	32.89	33.72	34.50	35.29	35.82	36.74	36.07	35.45
Others	8.10	8.36	8.58	8.52	8.45	8.40	8.34	8.33	8.27	8.41	8.58
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

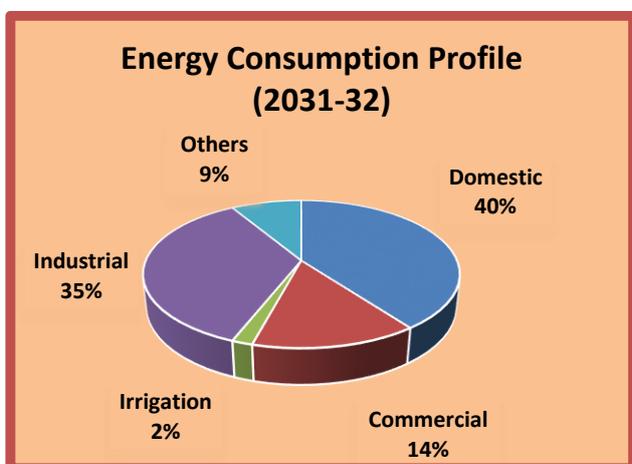
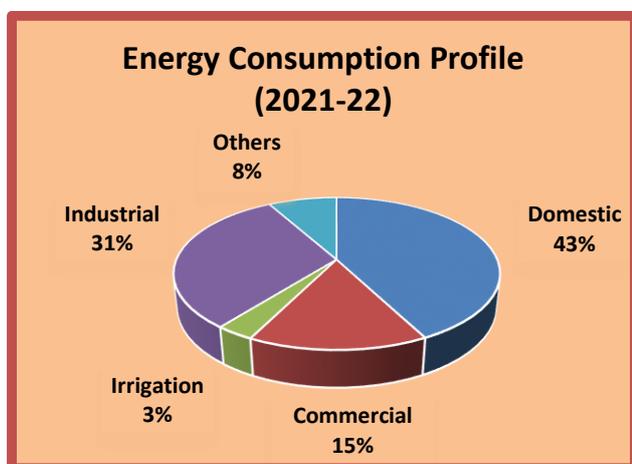


Table 5.84  
**ARUNACHAL PRADESH**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	207	223	242	262	283	305	328	354	382	412	440
2. Commercial	62	67	74	81	88	96	105	114	124	136	146
3. Public lighting	10	10	11	11	12	12	13	14	14	15	15
4. Public Water Works	0	0	0	0	0	0	0	0	0	0	0
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	2	2	2	2	2	2	2	2	2	2	2
7. HT Industries	165	179	193	210	228	246	264	283	303	319	334
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	25	27	28	30	31	33	35	36	38	40	41
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>470</b>	<b>508</b>	<b>550</b>	<b>595</b>	<b>644</b>	<b>694</b>	<b>746</b>	<b>802</b>	<b>863</b>	<b>923</b>	<b>978</b>
T&D losses -MU	387	390	394	397	400	401	401	400	400	397	391
T&D losses -in %	45.17	43.45	41.72	40.01	38.30	36.61	34.94	33.30	31.68	30.09	28.54
Energy Requirement - MU	857	898	945	992	1043	1095	1147	1203	1263	1320	1369
Annual Load Factor - %	57.67	57.06	56.77	56.45	56.31	56.15	55.93	55.87	55.75	55.68	55.45
<b>Peak Demand - MW</b>	<b>170</b>	<b>180</b>	<b>190</b>	<b>201</b>	<b>211</b>	<b>223</b>	<b>234</b>	<b>246</b>	<b>259</b>	<b>271</b>	<b>282</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>875</b>	<b>916</b>	<b>964</b>	<b>1012</b>	<b>1064</b>	<b>1117</b>	<b>1170</b>	<b>1227</b>	<b>1289</b>	<b>1347</b>	<b>1397</b>
T&D losses (Ex- Bus) -in %	46.27	44.58	42.89	41.21	39.54	37.88	36.25	34.63	33.04	31.49	29.97

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	43.96	43.95	44.02	43.96	43.91	43.95	44.02	44.11	44.23	44.63	44.96
Commercial	13.16	13.28	13.45	13.56	13.69	13.85	14.02	14.20	14.40	14.71	14.94
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	35.41	35.49	35.44	35.58	35.70	35.68	35.59	35.49	35.34	34.79	34.32
Others	7.46	7.29	7.09	6.90	6.71	6.53	6.37	6.20	6.02	5.88	5.78
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

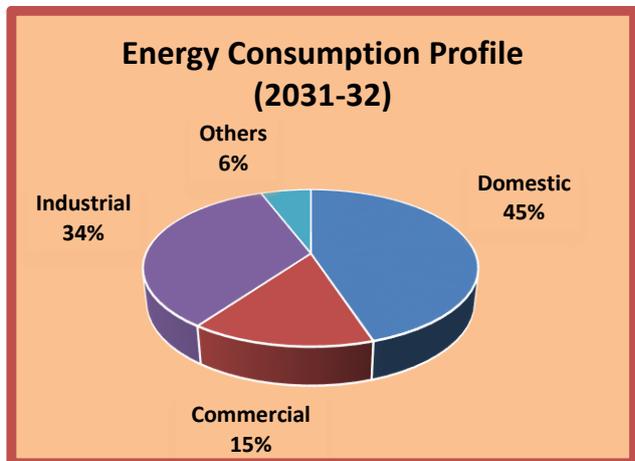
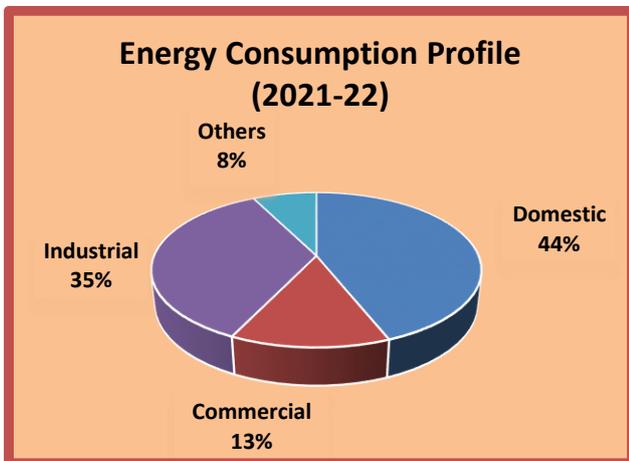


Table 5.85  
**ASSAM**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	3901	4517	4877	5263	5676	6118	6594	7109	7672	8295	8933
2. Commercial	1137	1302	1398	1500	1609	1727	1853	1992	2145	2319	2495
3. Public lighting	18	19	20	21	22	23	24	25	26	27	29
4. Public Water Works	78	80	83	85	87	89	91	93	95	97	99
5. Irrigation	47	50	54	58	61	66	70	75	79	84	90
6. LT Industries	110	116	122	129	136	143	150	157	164	171	178
7. HT Industries	1561	1607	1670	1759	1860	1965	2078	2196	2360	2396	2428
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	590	611	632	653	673	694	715	736	757	777	797
10. Others	1336	1397	1461	1527	1597	1669	1745	1823	1905	1990	2078
<b>Total Energy Consumption</b>	<b>8777</b>	<b>9699</b>	<b>10316</b>	<b>10994</b>	<b>11721</b>	<b>12493</b>	<b>13320</b>	<b>14206</b>	<b>15204</b>	<b>16157</b>	<b>17127</b>
T&D losses -MU	1901	2062	2140	2223	2307	2391	2476	2563	2659	2735	2801
T&D losses -in %	17.81	17.54	17.18	16.82	16.45	16.07	15.68	15.28	14.89	14.47	14.06
Energy Requirement - MU	10678	11761	12456	13217	14028	14885	15796	16769	17863	18892	19928
Annual Load Factor - %	57.03	56.50	56.29	56.12	55.97	55.81	55.65	55.51	55.36	55.23	55.11
<b>Peak Demand - MW</b>	<b>2138</b>	<b>2376</b>	<b>2526</b>	<b>2689</b>	<b>2861</b>	<b>3045</b>	<b>3240</b>	<b>3449</b>	<b>3683</b>	<b>3905</b>	<b>4128</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>10869</b>	<b>11972</b>	<b>12679</b>	<b>13454</b>	<b>14279</b>	<b>15151</b>	<b>16079</b>	<b>17069</b>	<b>18183</b>	<b>19230</b>	<b>20285</b>
T&D losses (Ex- Bus) -in %	19.25	18.99	18.64	18.28	17.92	17.54	17.16	16.77	16.38	15.98	15.57

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	44.44	46.57	47.28	47.87	48.42	48.97	49.50	50.04	50.46	51.34	52.16
Commercial	12.95	13.42	13.55	13.64	13.73	13.82	13.91	14.02	14.11	14.36	14.57
Irrigation	0.53	0.52	0.52	0.52	0.52	0.53	0.53	0.52	0.52	0.52	0.52
Industrial	19.03	17.77	17.37	17.18	17.02	16.87	16.73	16.56	16.60	15.89	15.22
Others	23.04	21.72	21.28	20.79	20.30	19.82	19.33	18.85	18.30	17.90	17.54
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

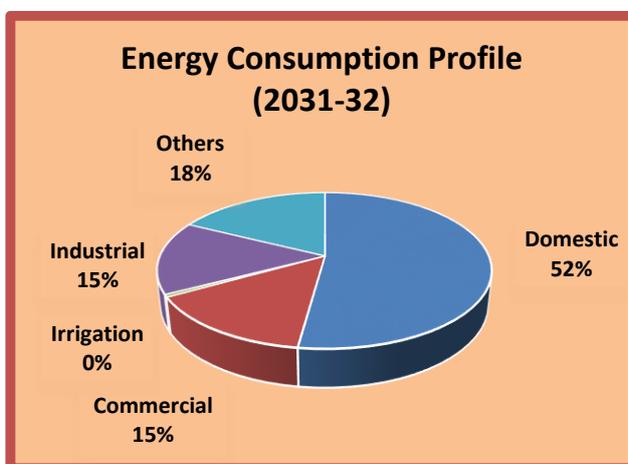
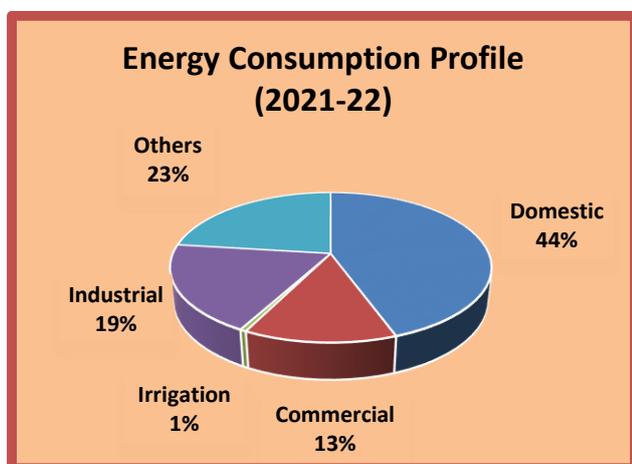


Table 5.86  
**MANIPUR**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	490	530	572	617	666	717	771	828	890	955	1020
2. Commercial	91	99	107	116	125	135	147	159	173	189	205
3. Public lighting	5	5	5	6	6	6	6	6	6	6	6
4. Public Water Works	22	23	25	26	27	28	30	31	33	34	36
5. Irrigation	7	7	7	7	8	8	8	8	8	8	8
6. LT Industries	20	21	22	24	25	26	28	29	31	32	34
7. HT Industries	12	13	14	15	16	17	19	20	22	23	23
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	84	85	86	87	88	89	90	91	92	92	93
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>732</b>	<b>784</b>	<b>839</b>	<b>897</b>	<b>961</b>	<b>1027</b>	<b>1098</b>	<b>1172</b>	<b>1253</b>	<b>1339</b>	<b>1425</b>
T&D losses -MU	275	282	288	294	300	306	312	317	322	327	330
T&D losses -in %	27.31	26.44	25.56	24.69	23.83	22.97	22.12	21.28	20.45	19.63	18.83
Energy Requirement - MU	1007	1066	1127	1191	1261	1333	1410	1488	1575	1666	1755
Annual Load Factor - %	44.12	44.13	44.18	44.21	44.25	44.28	44.32	44.40	44.49	44.59	44.72
<b>Peak Demand - MW</b>	<b>260</b>	<b>276</b>	<b>291</b>	<b>308</b>	<b>325</b>	<b>344</b>	<b>363</b>	<b>383</b>	<b>404</b>	<b>426</b>	<b>448</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>1029</b>	<b>1089</b>	<b>1152</b>	<b>1218</b>	<b>1289</b>	<b>1363</b>	<b>1441</b>	<b>1522</b>	<b>1610</b>	<b>1703</b>	<b>1794</b>
T&D losses (Ex- Bus) -in %	28.89	28.04	27.18	26.33	25.49	24.65	23.82	23.00	22.18	21.38	20.60

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	66.95	67.60	68.21	68.80	69.29	69.81	70.23	70.67	71.00	71.32	71.60
Commercial	12.47	12.61	12.74	12.88	13.02	13.19	13.36	13.57	13.82	14.11	14.40
Irrigation	0.98	0.93	0.88	0.83	0.79	0.74	0.70	0.66	0.63	0.59	0.56
Industrial	4.39	4.35	4.31	4.26	4.31	4.24	4.26	4.18	4.18	4.10	4.02
Others	15.21	14.51	13.86	13.23	12.60	12.01	11.44	10.92	10.38	9.88	9.43
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

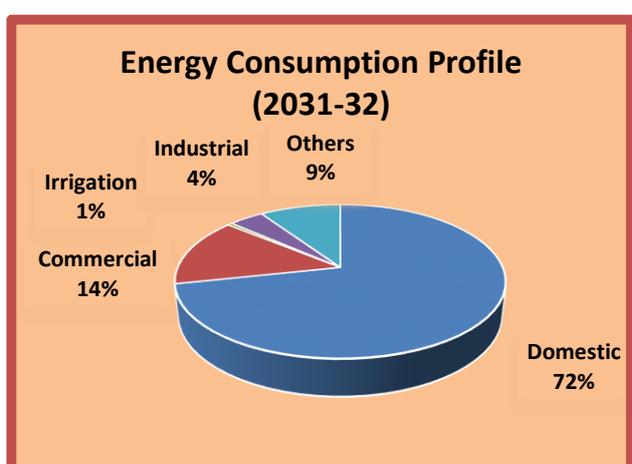
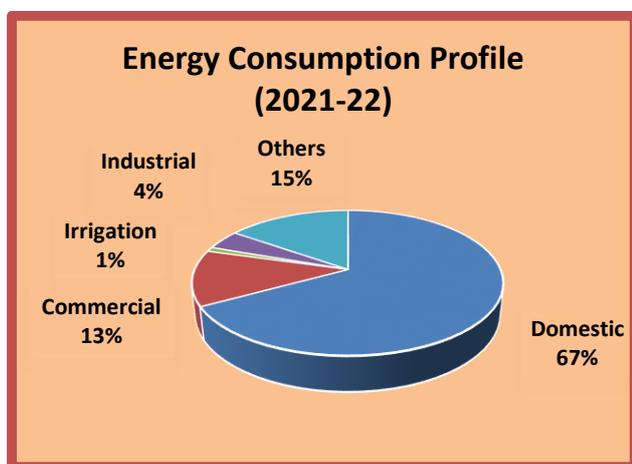


Table 5.87  
**MEGHALAYA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	554	578	602	627	653	680	709	739	773	808	831
2. Commercial	97	102	107	113	119	126	134	143	154	168	180
3. Public lighting	1	1	2	2	2	2	2	2	2	2	2
4. Public Water Works	43	45	47	48	50	52	54	55	57	59	60
5. Irrigation	0	0	0	0	0	0	0	0	1	1	1
6. LT Industries	7	7	8	8	9	10	10	11	11	12	12
7. HT Industries	643	681	721	764	808	854	899	943	985	1009	1042
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	97	100	102	105	107	109	111	113	115	116	118
10. Others	210	217	223	230	236	241	247	253	258	263	267
<b>Total Energy Consumption</b>	<b>1654</b>	<b>1732</b>	<b>1813</b>	<b>1897</b>	<b>1984</b>	<b>2074</b>	<b>2166</b>	<b>2259</b>	<b>2355</b>	<b>2437</b>	<b>2514</b>
T&D losses -MU	586	593	598	603	607	609	609	608	606	598	587
T&D losses -in %	26.15	25.50	24.82	24.13	23.42	22.69	21.95	21.21	20.46	19.70	18.94
Energy Requirement - MU	2240	2325	2411	2500	2591	2682	2775	2867	2961	3035	3101
Annual Load Factor - %	62.63	62.56	62.48	62.41	62.33	62.24	62.14	62.02	61.88	61.72	61.56
<b>Peak Demand - MW</b>	<b>408</b>	<b>424</b>	<b>441</b>	<b>457</b>	<b>474</b>	<b>492</b>	<b>510</b>	<b>528</b>	<b>546</b>	<b>561</b>	<b>575</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>2264</b>	<b>2350</b>	<b>2437</b>	<b>2527</b>	<b>2618</b>	<b>2711</b>	<b>2805</b>	<b>2898</b>	<b>2993</b>	<b>3067</b>	<b>3134</b>
T&D losses (Ex- Bus) -in %	26.93	26.28	25.62	24.93	24.22	23.51	22.78	22.04	21.30	20.55	19.80

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	33.51	33.37	33.22	33.05	32.91	32.79	32.72	32.73	32.80	33.14	33.05
Commercial	5.89	5.91	5.93	5.95	6.00	6.07	6.17	6.33	6.55	6.90	7.16
Irrigation	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Industrial	39.31	39.75	40.22	40.72	41.20	41.63	41.98	42.20	42.31	41.89	41.95
Others	21.28	20.96	20.62	20.25	19.88	19.49	19.11	18.72	18.33	18.05	17.81
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

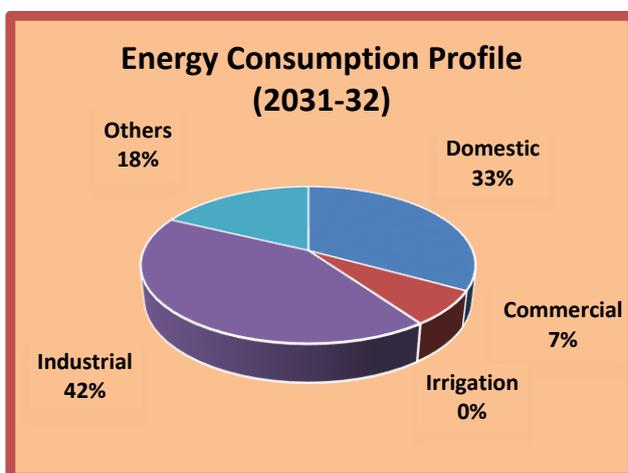
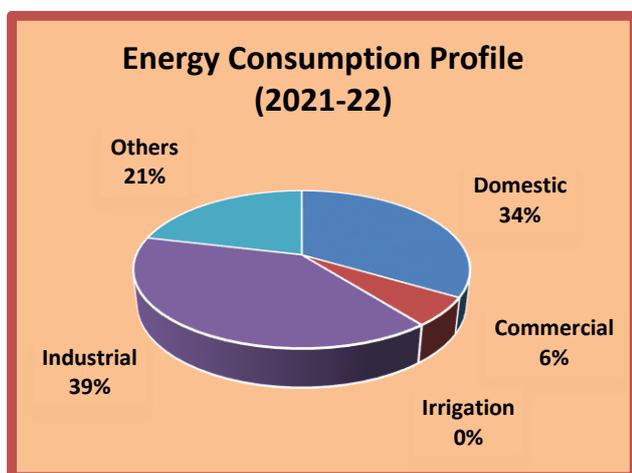


Table 5.88  
**MIZORAM**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	466	515	569	627	690	758	831	908	989	1074	1165
2. Commercial	76	85	94	103	114	125	137	149	162	175	192
3. Public lighting	15	16	18	19	21	22	24	26	28	30	32
4. Public Water Works	75	79	83	87	91	95	99	103	107	112	116
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	4	5	5	6	6	7	8	8	9	10	11
7. HT Industries	16	18	19	21	25	27	30	32	35	37	38
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	9	9	10	11	12	13	14	15	16	17	18
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>661</b>	<b>726</b>	<b>798</b>	<b>875</b>	<b>958</b>	<b>1046</b>	<b>1142</b>	<b>1241</b>	<b>1347</b>	<b>1455</b>	<b>1573</b>
T&D losses -MU	146	153	161	168	175	182	188	194	199	203	208
T&D losses -in %	18.05	17.40	16.74	16.09	15.44	14.79	14.15	13.51	12.88	12.26	11.66
Energy Requirement - MU	806	879	959	1042	1133	1228	1330	1435	1546	1658	1781
Annual Load Factor - %	58.64	59.03	59.50	59.85	60.28	60.55	60.90	61.04	61.14	61.26	61.39
<b>Peak Demand - MW</b>	<b>157</b>	<b>170</b>	<b>184</b>	<b>199</b>	<b>215</b>	<b>231</b>	<b>249</b>	<b>268</b>	<b>289</b>	<b>309</b>	<b>331</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>823</b>	<b>897</b>	<b>978</b>	<b>1063</b>	<b>1156</b>	<b>1252</b>	<b>1357</b>	<b>1464</b>	<b>1577</b>	<b>1691</b>	<b>1816</b>
T&D losses (Ex- Bus) -in %	19.65	19.01	18.38	17.73	17.10	16.46	15.83	15.20	14.59	13.98	13.39

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	70.44	70.88	71.30	71.71	72.04	72.43	72.74	73.12	73.45	73.83	74.08
Commercial	11.56	11.64	11.74	11.80	11.86	11.91	11.96	11.99	12.00	12.01	12.22
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	3.08	3.10	3.11	3.12	3.23	3.23	3.31	3.28	3.31	3.24	3.11
Others	14.92	14.39	13.85	13.36	12.87	12.43	11.99	11.60	11.24	10.91	10.58
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

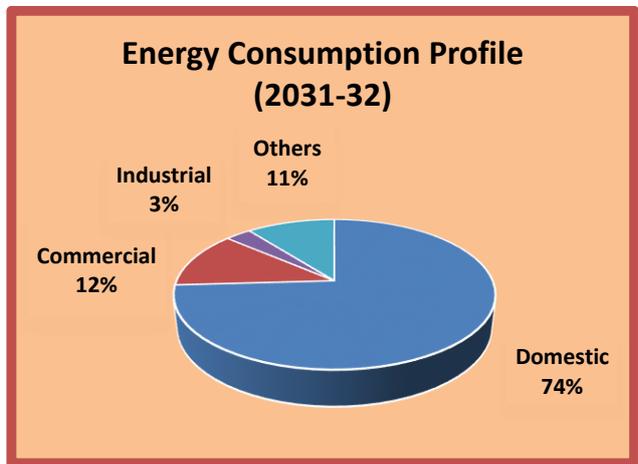
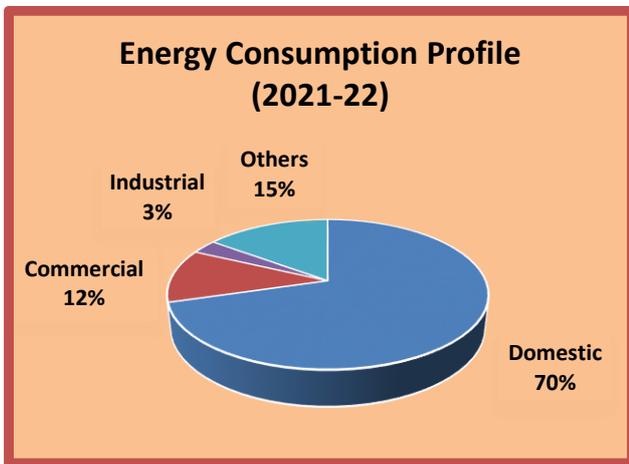


Table 5.89  
**NAGALAND**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	392	413	436	458	481	506	530	556	581	604	617
2. Commercial	85	90	95	101	106	112	119	126	134	143	150
3. Public lighting	32	32	32	33	33	34	34	34	34	35	35
4. Public Water Works	0	0	0	1	1	1	1	1	1	1	1
5. Irrigation	0	0	0	0	0	0	0	0	0	0	0
6. LT Industries	41	43	45	47	49	52	53	55	56	56	56
7. HT Industries	0	0	0	0	0	0	0	0	0	0	0
8. Railway Traction	0	0	0	0	0	0	0	0	0	0	0
9. Bulk Supply	104	110	116	122	128	135	141	148	155	162	169
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>655</b>	<b>689</b>	<b>725</b>	<b>761</b>	<b>799</b>	<b>839</b>	<b>878</b>	<b>920</b>	<b>961</b>	<b>1001</b>	<b>1027</b>
T&D losses -MU	196	202	209	216	222	228	233	238	243	246	246
T&D losses -in %	23.01	22.71	22.40	22.07	21.72	21.35	20.97	20.57	20.17	19.75	19.31
Energy Requirement - MU	850	891	934	977	1021	1066	1111	1158	1204	1247	1273
Annual Load Factor - %	62.66	62.55	62.53	62.42	62.30	62.26	62.15	62.10	62.03	61.94	61.83
<b>Peak Demand - MW</b>	<b>155</b>	<b>163</b>	<b>171</b>	<b>179</b>	<b>187</b>	<b>195</b>	<b>204</b>	<b>213</b>	<b>221</b>	<b>230</b>	<b>235</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>867</b>	<b>909</b>	<b>953</b>	<b>997</b>	<b>1041</b>	<b>1088</b>	<b>1134</b>	<b>1182</b>	<b>1228</b>	<b>1272</b>	<b>1299</b>
T&D losses (Ex- Bus) -in %	24.52	24.23	23.92	23.59	23.25	22.89	22.52	22.13	21.73	21.32	20.89

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	59.86	59.96	60.08	60.17	60.25	60.33	60.38	60.43	60.43	60.36	60.03
Commercial	13.06	13.10	13.16	13.22	13.30	13.41	13.55	13.74	13.98	14.32	14.60
Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Industrial	6.24	6.24	6.23	6.22	6.19	6.15	6.08	5.98	5.83	5.61	5.45
Others	20.85	20.70	20.53	20.40	20.26	20.11	19.99	19.85	19.76	19.71	19.93
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

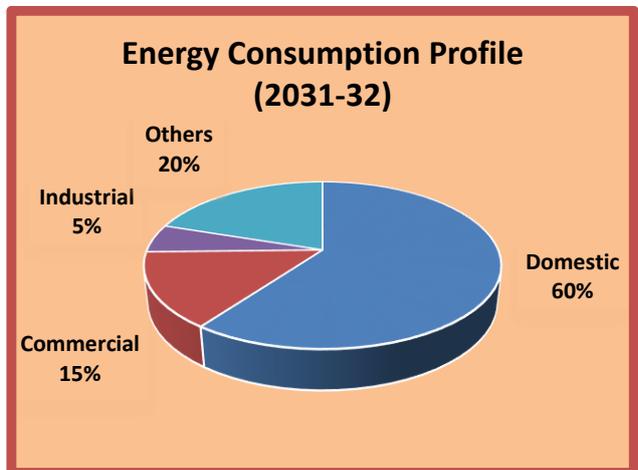
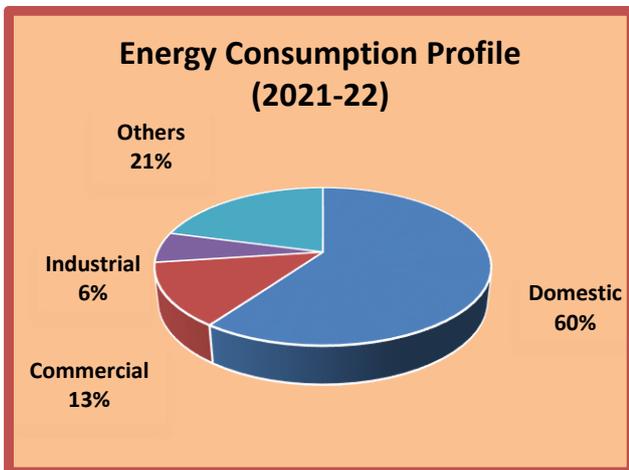
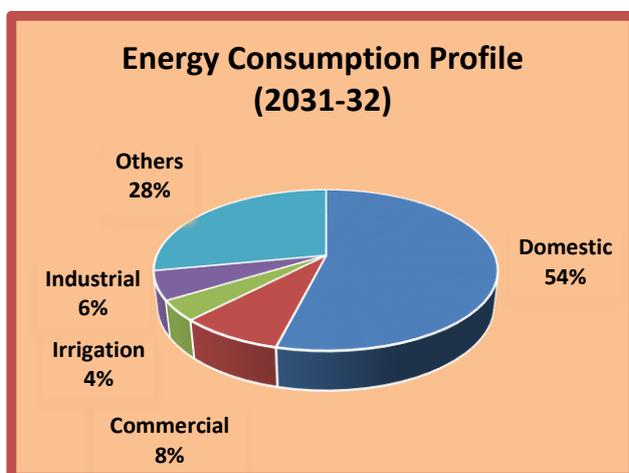
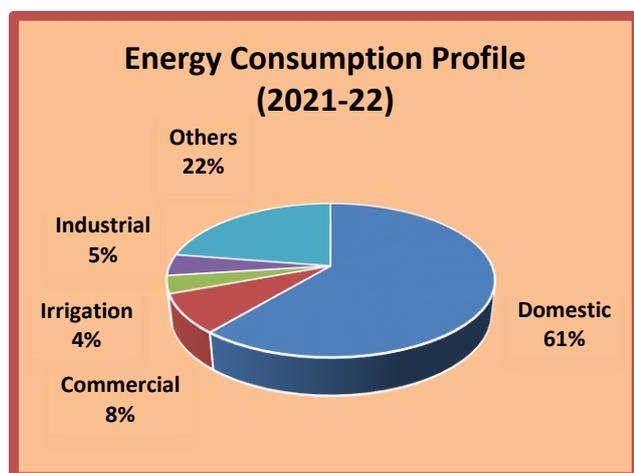


Table 5.90  
**TRIPURA**  
 20TH ELECTRIC POWER SURVEY  
 ELECTRICAL ENERGY CONSUMPTION, ENERGY REQUIREMENT AND PEAK ELECTRICITY DEMAND  
 (CATEGORY WISE & YEAR WISE FORECAST)  
 2021-22 to 2031-32

Consumption Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Energy Consumption -MUs											
1. Domestic	642	683	724	767	812	857	903	949	996	1045	1088
2. Commercial	86	92	97	103	110	117	125	133	143	155	167
3. Public lighting	54	57	60	63	66	70	73	77	80	84	88
4. Public Water Works	84	89	95	101	106	112	119	125	132	138	145
5. Irrigation	39	41	43	44	46	57	62	66	72	77	82
6. LT Industries	37	40	43	47	51	55	59	63	68	72	77
7. HT Industries	11	12	13	16	19	22	26	30	35	37	39
8. Railway Traction	0	0	117	117	117	156	156	156	156	156	156
9. Bulk Supply	99	105	112	119	127	134	142	150	159	167	176
10. Others	0	0	0	0	0	0	0	0	0	0	0
<b>Total Energy Consumption</b>	<b>1051</b>	<b>1118</b>	<b>1305</b>	<b>1377</b>	<b>1455</b>	<b>1581</b>	<b>1665</b>	<b>1750</b>	<b>1841</b>	<b>1933</b>	<b>2018</b>
T&D losses -MU	519	529	591	596	600	620	621	620	618	614	606
T&D losses -in %	33.07	32.13	31.17	30.18	29.19	28.18	27.17	26.15	25.13	24.11	23.10
Energy Requirement - MU	1570	1648	1896	1973	2054	2202	2286	2369	2459	2546	2624
Annual Load Factor - %	54.50	52.90	51.37	49.86	48.47	47.35	46.03	44.72	43.53	42.32	40.96
<b>Peak Demand - MW</b>	<b>329</b>	<b>356</b>	<b>421</b>	<b>452</b>	<b>484</b>	<b>531</b>	<b>567</b>	<b>605</b>	<b>645</b>	<b>687</b>	<b>731</b>
<b>Energy Requirement (Ex-Bus) - MU</b>	<b>1585</b>	<b>1663</b>	<b>1913</b>	<b>1991</b>	<b>2073</b>	<b>2222</b>	<b>2306</b>	<b>2391</b>	<b>2481</b>	<b>2570</b>	<b>2648</b>
T&D losses (Ex- Bus) -in %	33.68	32.74	31.79	30.81	29.83	28.83	27.82	26.81	25.80	24.79	23.79

**Pattern of Utilization**

Categories	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Domestic	61.07	61.04	55.50	55.71	55.79	54.22	54.23	54.22	54.12	54.09	53.90
Commercial	8.19	8.20	7.46	7.51	7.57	7.42	7.50	7.61	7.78	8.03	8.26
Irrigation	3.72	3.65	3.27	3.18	3.18	3.60	3.72	3.79	3.91	3.98	4.07
Industrial	4.52	4.64	4.34	4.55	4.82	4.85	5.09	5.31	5.57	5.65	5.75
Others	22.49	22.47	29.43	29.04	28.64	29.90	29.46	29.06	28.63	28.25	28.01
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00



## Chapter-6

## Perspective Electricity Demand Projection (2036-37 and 2041-42)

This chapter covers the long term projection of electrical energy consumption, electrical energy requirement, peak electricity demand, T&D losses and load factor for the years 2036-37 and 2041-42. The projection has been done for States/UTs/Regions and all-India by extrapolating the electricity consumption figures with suitable growth rates. The electrical energy requirement has been worked out by adding T&D losses estimated by extending the T&D losses trajectories further. The Peak electricity demand of each State/UT has been derived by assuming suitable load factor. The long term electricity demand projection on all-India basis is summarized in Table 6.1.

Table 6.1: Long term electricity demand projection for the years 2031-32, 2036-37 &amp; 2041-42 on all-India basis

Particulars	Year			CAGR (in %)	
	2031-32	2036-37	2041-42	2031-32 to	2036-37 to
				2036-37	2041-42
Total Energy Consumption - MU	21,33,380	27,55,874	34,22,845	5.25	4.43
T&D losses –MU	3,40,396	3,39,613	3,53,475		
T&D losses (Ex- Bus) - %	13.76	10.97	9.36		
Energy Requirement (Ex-Bus) - MU	24,73,776	30,95,487	37,76,321	4.59	4.06
Annual Load Factor - %	77.07	75.91	75.01		
Peak Demand (Ex-Bus) – MW	3,66,393	4,65,531	5,74,689	4.91	4.30

The region-wise electricity demand projection for the years 2031-32, 2036-37 & 2041-42 is summarized in Table 6.2.

Table 6.2: Summary of region-wise electrical energy requirement &amp; peak electricity demand for the years 2031-32, 2036-37 &amp; 2041-42

Region	Energy Requirement (in MU)			Peak Demand (in MW)		
	2031-32	2036-37	2041-42	2031-32	2036-37	2041-42
Northern Region	7,73,545	9,68,339	11,80,168	1,27,553	1,59,205	1,93,381
Western Region	7,63,198	9,48,220	11,52,344	1,14,766	1,43,122	1,74,716
Southern Region	5,96,557	7,42,266	8,98,048	1,07,259	1,36,946	1,67,392
Eastern Region	3,08,103	3,95,351	4,93,973	50,420	66,296	84,276
North Eastern Region	32,373	41,312	51,788	6,519	8,608	10,937
All India	24,73,776	30,95,487	37,76,321	3,66,393	4,65,531	5,74,689

### Summary of Electricity Demand Projection:

Electrical energy requirement and peak electricity demand for the year 2021-22 to 2041-42 are summarized in Table 6.3. CAGR of electrical energy requirement and peak electricity demand is summarized in Table 6.4.

Table 6.3: Electrical Energy Requirement and Peak Electricity Demand from the year 2021-22 to 2041-42 on all-India basis

Year	Energy Requirement	Peak Demand
	(MU)	(MW)
2021-22	13,81,646	2,03,115
2026-27	19,07,835	2,77,201
2031-32	24,73,776	3,66,393
2036-37	30,95,487	4,65,531
2041-42	37,76,321	5,74,689

Table 6.4: CAGR of Electrical Energy Requirement and Peak Electricity Demand from the year 2021-22 to 2041-42 on all-India basis

Year	Growth in Energy Requirement	CAGR of Energy Requirement	Growth in Peak Demand	CAGR of Peak Demand
	(MU)	(%)	(MW)	(%)
2021-22 to 2026-27	5,26,189	6.67	74,085	6.42
2026-27 to 2031-32	5,65,941	5.33	89,192	5.74
2031-32 to 2036-37	6,21,711	4.59	99,139	4.91
2036-37 to 2041-42	6,80,834	4.06	1,09,158	4.30

State/UT-wise projections of electrical energy consumption, T&D losses, electrical energy requirement, load factor and peak electricity demand for the years 2031-32, 2036-37 and 2041-42 are summarized in Tables 6.5 - 6.9.

Table 6.5 - State/UT wise Electrical Energy Consumption (in MU)

State	2031-32	2036-37	2041-42
Chandigarh	1,934	2,191	2,467
Delhi	48,040	59,770	74,246
Haryana	97,617	1,28,897	1,63,483
Himachal Pradesh	16,340	20,179	24,424
J&K	23,110	33,124	43,041
Ladakh	513	813	1,199
Punjab	89,520	1,12,849	1,38,726
Rajasthan	1,46,012	1,91,133	2,40,404
Uttar Pradesh	2,14,598	2,82,742	3,49,829
Uttarakhand	22,273	28,113	34,127
<b>Northern Region</b>	<b>6,59,956</b>	<b>8,59,811</b>	<b>10,71,947</b>
Chhattisgarh	54,712	72,040	89,313
Dadar Nagar Haveli	11,105	13,764	16,962
Daman & Diu	4,034	5,012	6,115
Goa	5,867	7,491	9,353
Gujarat	2,11,454	2,73,757	3,35,697
Madhya Pradesh	1,39,026	1,89,344	2,47,791
Maharashtra	2,28,230	2,80,927	3,35,083
<b>Western Region</b>	<b>6,54,429</b>	<b>8,42,334</b>	<b>10,40,312</b>
Andhra Pradesh	1,21,978	1,58,130	1,94,675
Karnataka	93,460	1,12,825	1,34,870
Kerala	38,683	47,532	56,851
Lakshadweep	71	81	91
Puducherry	3,514	4,061	4,660
Tamil Nadu	1,63,156	2,04,250	2,44,703
Telangana	1,07,809	1,39,312	1,78,085
<b>Southern Region</b>	<b>5,28,672</b>	<b>6,66,191</b>	<b>8,13,934</b>
A&N	345	375	405
Bihar	67,699	97,064	1,32,930
DVC	30,277	39,405	49,603
Jharkhand	29,068	38,640	49,396
Odisha	50,952	62,752	74,431
Sikkim	911	1,274	1,744
West Bengal	84,410	1,11,864	1,41,206
<b>Eastern Region</b>	<b>2,63,662</b>	<b>3,51,374</b>	<b>4,49,717</b>
AP	978	1,418	1,900
Assam	17,127	23,304	30,338
Manipur	1,425	1,994	2,665
Meghalaya	2,514	3,127	3,748
Mizoram	1,573	2,296	3,238
Nagaland	1,027	1,328	1,657
Tripura	2,018	2,698	3,388
<b>North Eastern Region</b>	<b>26,662</b>	<b>36,163</b>	<b>46,935</b>
<b>All India</b>	<b>21,33,380</b>	<b>27,55,874</b>	<b>34,22,845</b>

Table 6.6 - State/UT wise T&amp;D Losses (in %)

State	2031-32	2036-37	2041-42
Chandigarh	10.32	9.43	8.61
Delhi	9.00	8.59	8.20
Haryana	14.85	12.02	9.54
Himachal Pradesh	13.12	11.28	9.56
J&K	18.32	6.25	1.81
Ladakh	6.97	6.66	6.37
Punjab	14.68	11.25	9.15
Rajasthan	15.05	11.57	9.66
Uttar Pradesh	15.50	11.74	9.64
Uttarakhand	12.74	10.56	9.58
<b>Northern Region</b>	<b>14.68</b>	<b>11.21</b>	<b>9.17</b>
Chhattisgarh	13.75	10.86	9.37
Dadar Nagar Haveli	6.83	6.83	6.83
Daman & Diu	7.36	7.36	7.36
Goa	14.32	11.22	9.37
Gujarat	12.98	10.57	9.83
Madhya Pradesh	17.66	12.83	9.77
Maharashtra	13.81	10.94	9.86
<b>Western Region</b>	<b>14.25</b>	<b>11.17</b>	<b>9.72</b>
Andhra Pradesh	10.98	10.04	9.65
Karnataka	11.81	10.58	9.49
Kerala	9.80	9.63	9.46
Lakshadweep	7.85	7.73	7.62
Puducherry	10.95	9.90	8.95
Tamil Nadu	12.33	10.60	9.11
Telangana	10.57	9.91	9.30
<b>Southern Region</b>	<b>11.38</b>	<b>10.25</b>	<b>9.37</b>
A&N	12.34	10.72	9.31
Bihar	18.31	13.89	9.80
DVC	3.00	3.00	3.00
Jharkhand	14.00	11.05	9.61
Odisha	14.06	11.09	9.54
Sikkim	16.64	12.48	9.85
West Bengal	15.12	11.30	9.57
<b>Eastern Region</b>	<b>14.42</b>	<b>11.12</b>	<b>8.96</b>
AP	29.97	17.57	9.06
Assam	15.57	11.67	9.25
Manipur	20.60	14.07	9.67
Meghalaya	19.80	13.44	9.66
Mizoram	13.39	11.02	9.90
Nagaland	20.89	14.06	9.49
Tripura	23.79	14.39	9.52
<b>North Eastern Region</b>	<b>17.64</b>	<b>12.46</b>	<b>9.37</b>
<b>All India</b>	<b>13.76</b>	<b>10.97</b>	<b>9.36</b>

Table 6.7 - State/UT wise Electrical Energy Requirement – Ex Bus (in MU)

State	2031-32	2036-37	2041-42
Chandigarh	2,157	2,419	2,699
Delhi	52,792	65,387	80,877
Haryana	1,14,636	1,46,508	1,80,729
Himachal Pradesh	18,807	22,746	27,007
J&K	28,294	35,332	43,837
Ladakh	551	871	1,281
Punjab	1,04,928	1,27,155	1,52,702
Rajasthan	1,71,883	2,16,144	2,66,124
Uttar Pradesh	2,53,974	3,20,346	3,87,169
Uttarakhand	25,524	31,432	37,744
<b>Northern Region</b>	<b>7,73,545</b>	<b>9,68,339</b>	<b>11,80,168</b>
Chhattisgarh	63,436	80,819	98,546
Dadar Nagar Haveli	11,919	14,773	18,205
Daman & Diu	4,355	5,410	6,600
Goa	6,847	8,438	10,319
Gujarat	2,42,993	3,06,115	3,72,295
Madhya Pradesh	1,68,854	2,17,218	2,74,636
Maharashtra	2,64,793	3,15,446	3,71,742
<b>Western Region</b>	<b>7,63,198</b>	<b>9,48,220</b>	<b>11,52,344</b>
Andhra Pradesh	1,37,022	1,75,787	2,15,460
Karnataka	1,05,970	1,26,178	1,49,005
Kerala	42,885	52,596	62,791
Lakshadweep	77	88	99
Puducherry	3,947	4,507	5,117
Tamil Nadu	1,86,106	2,28,470	2,69,237
Telangana	1,20,549	1,54,641	1,96,338
<b>Southern Region</b>	<b>5,96,557</b>	<b>7,42,266</b>	<b>8,98,048</b>
A&N	394	420	447
Bihar	82,876	1,12,716	1,47,379
DVC	31,211	40,621	51,135
Jharkhand	33,799	43,441	54,647
Odisha	59,286	70,582	82,285
Sikkim	1,093	1,456	1,935
West Bengal	99,443	1,26,114	1,56,145
<b>Eastern Region</b>	<b>3,08,103</b>	<b>3,95,351</b>	<b>4,93,973</b>
AP	1,397	1,720	2,089
Assam	20,285	26,384	33,430
Manipur	1,794	2,320	2,950
Meghalaya	3,134	3,612	4,149
Mizoram	1,816	2,580	3,594
Nagaland	1,299	1,545	1,830
Tripura	2,648	3,151	3,745
<b>North Eastern Region</b>	<b>32,373</b>	<b>41,312</b>	<b>51,788</b>
<b>All India</b>	<b>24,73,776</b>	<b>30,95,487</b>	<b>37,76,321</b>

Table 6.8 - State/UT wise Load Factors (in %)

State	2031-32	2036-37	2041-42
Chandigarh	42.18	41.56	40.94
Delhi	48.02	47.85	47.69
Haryana	59.09	60.77	62.24
Himachal Pradesh	66.32	65.97	65.62
J&K	68.08	66.17	64.59
Ladakh	52.39	58.30	60.07
Punjab	57.12	58.53	59.88
Rajasthan	71.72	72.87	74.47
Uttar Pradesh	64.64	64.63	64.65
Uttarakhand	68.83	68.13	67.45
<b>Northern Region</b>	<b>69.23</b>	<b>69.43</b>	<b>69.67</b>
Chhattisgarh	73.84	71.62	69.03
Dadar Nagar Haveli	81.44	80.41	79.81
Daman & Diu	76.26	75.42	74.52
Goa	67.17	66.66	66.18
Gujarat	75.78	76.00	76.23
Madhya Pradesh	69.15	72.27	76.21
Maharashtra	67.05	65.83	64.62
<b>Western Region</b>	<b>75.91</b>	<b>75.63</b>	<b>75.29</b>
Andhra Pradesh	63.66	64.30	65.83
Karnataka	55.50	54.90	54.28
Kerala	68.79	69.29	69.79
Lakshadweep	58.64	59.19	59.68
Puducherry	67.27	67.14	67.02
Tamil Nadu	74.08	73.52	72.99
Telangana	50.25	48.03	46.77
<b>Southern Region</b>	<b>63.49</b>	<b>61.87</b>	<b>61.24</b>
A&N	60.20	57.84	55.45
Bihar	61.19	60.75	60.45
DVC	63.07	62.77	61.73
Jharkhand	76.85	77.00	77.10
Odisha	68.72	64.82	60.75
Sikkim	50.94	50.54	50.13
West Bengal	67.14	66.97	66.77
<b>Eastern Region</b>	<b>69.76</b>	<b>68.08</b>	<b>66.91</b>
AP	55.45	54.66	53.80
Assam	55.11	54.34	53.51
Manipur	44.72	44.96	45.04
Meghalaya	61.56	60.87	60.17
Mizoram	61.39	62.83	64.82
Nagaland	61.83	61.38	60.92
Tripura	40.96	37.46	35.84
<b>North Eastern Region</b>	<b>56.69</b>	<b>54.79</b>	<b>54.05</b>
<b>All India</b>	<b>77.07</b>	<b>75.91</b>	<b>75.01</b>

Table 6.9 - State/UT wise Peak Electricity Demand – Ex Bus (in MW)

State	2031-32	2036-37	2041-42
Chandigarh	563	641	726
Delhi	12,222	15,189	18,849
Haryana	21,644	26,896	32,396
Himachal Pradesh	3,190	3,878	4,629
J&K	4,633	5,952	7,566
Ladakh	120	170	243
Punjab	20,587	24,348	28,581
Rajasthan	27,032	33,459	40,307
Uttar Pradesh	44,066	55,592	67,170
Uttarakhand	4,159	5,175	6,276
<b>Northern Region</b>	<b>1,27,553</b>	<b>1,59,205</b>	<b>1,93,381</b>
Chhattisgarh	9,713	12,758	16,141
Dadar Nagar Haveli	1,617	2,030	2,521
Daman & Diu	631	793	979
Goa	1,128	1,401	1,725
Gujarat	36,287	45,581	55,267
Madhya Pradesh	27,386	33,708	40,412
Maharashtra	44,622	54,137	64,999
<b>Western Region</b>	<b>1,14,766</b>	<b>1,43,122</b>	<b>1,74,716</b>
Andhra Pradesh	24,387	30,975	37,081
Karnataka	21,613	26,016	31,071
Kerala	6,967	8,483	10,055
Lakshadweep	15	17	19
Puducherry	652	746	849
Tamil Nadu	28,291	34,996	41,543
Telangana	27,059	36,315	47,349
<b>Southern Region</b>	<b>1,07,259</b>	<b>1,36,946</b>	<b>1,67,392</b>
A&N	75	83	92
Bihar	15,159	20,765	27,287
DVC	5,649	7,388	9,456
Jharkhand	4,997	6,409	8,052
Odisha	9,782	12,347	15,358
Sikkim	241	323	433
West Bengal	16,824	21,391	26,562
<b>Eastern Region</b>	<b>50,420</b>	<b>66,296</b>	<b>84,276</b>
AP	282	352	434
Assam	4,128	5,445	7,006
Manipur	448	576	731
Meghalaya	575	670	779
Mizoram	331	460	621
Nagaland	235	282	336
Tripura	731	952	1,182
<b>North Eastern Region</b>	<b>6,519</b>	<b>8,608</b>	<b>10,937</b>
<b>All India</b>	<b>3,66,393</b>	<b>4,65,531</b>	<b>5,74,689</b>

## Chapter-7

### Electricity Demand Projection inclusive of Captive Power Plants & Solar Roof Top

The report, hitherto, covers electricity demand projection only for the utility system. The projections do not include the portion of electricity demand of industries and other consumers that would be met from their internal resources locally such as from Captive Power Plants (CPPs) and solar roof tops. This chapter presents an assessment of power demand of the country inclusive of the demand met from CPPs and solar roof tops.

#### 7.1 Captive Power Plants (CPPs)

Large number of captive power plants including co-generation power plants of varied types and sizes exist in the country which are either utilized in process industry or for in-house consumption. A number of industries do not want to depend upon grid power and have set up their captive power plants so that reliable and quality power should be available to them. Some captive plants are also installed as standby units for operation only during emergencies when the grid supply is not available. Captive power plants including co-generation power plants, therefore play a supplementary role in meeting the country's electricity demand.

The growth of captive plants in India can broadly be attributed to:

- i. Need for backup power arrangement.
- ii. Requirement of better quality supply.
- iii. Co-generation benefits of steam and electricity from production process of industries,
- iv. Need to generate electricity at costs lower than the high industrial tariffs set to cross subsidize other categories of consumers.

Over the years, captive power plants have evolved from plants owned by single promoters to group captives to the medium of maximizing the benefit by selling their surplus power. The Installed Capacity of Captive Power plants (1 MW and above) has grown substantially from 588 MW in 1950 to 78,508 MW as of March, 2021. The gross energy generated by CPPs was 224,833 MU in 2020-21. The details are indicated in Table 7.1.

Table 7.1 CPPs Installed Capacity (1MW &amp; above as on 31.03.2021)

Sl. No.	Type	Installed Capacity (MW)	Gross Generation (MU) in 2020-21
1	Hydro	131	339
2	Steam	47,760	193,143
3	Diesel	17,563	2,504
4	Gas	7,361	21,684
5.	RES (Solar, Wind etc.)	5,694	7,158
	<b>Total</b>	<b>78,508</b>	<b>224,833</b>

With improvement in grid supply, the industries may shift to grid supply rather than consuming electricity from captive power plants. However, since the electricity tariff for industrial and commercial consumers is high at present as these are cross-subsidizing small consumers, it may be cheaper for industrial and commercial consumers to take power from their captive power plants. Therefore, growth has still been observed in captive power plant installation and similar trends are expected in future.

Table 7.2 Electrical Energy Generation &amp; Self Consumption of CPPs (in MU)

	Energy Generated	Auxiliary Consumption	Net Generation	Export to Utilities	Self-Consumption
2010-11	120917	10591	110326	14228	96098
2011-12	134388	11863	122525	10263	112262
2012-13	144010	12498	131512	16054	115458
2013-14	148988	12687	136301	14001	122300
2014-15	162057	14589	147468	13197	134272
2015-16	168372	14693	153680	15853	137827
2016-17	172046	14887	157159	10070	147090
2017-18	179777	16152	163625	13329	150296
2018-19	213074	17256	195818	23364	172454
2019-20	239567	17755	221812	26072	195739
2020-21	224833	14939	209894	21336	188558

The demands of CPP's self-consumption are likely to shift on the grid in case of some operational constraints that may happen temporarily only.

**Methodology for Forecasting CPPs Self Consumption:**

- i. The energy generated from CPPs is generally used by its owner for meeting its energy requirement and any surplus power is fed into the grid. The energy exported by CPPs to grid has already been accounted for in Discom/State consumptions.
- ii. The self-consumption from CPPs is taken by subtracting energy exported by it to the grid from its Net Generation. The details of self-consumption during past years are given at **Table 7.2** that is indicating an annual average growth rate of 7.15%.
- iii. The weighted average annual growth of CPPs' self-consumption is estimated as 6.38%. It has been assumed that the growth trends will continue as per the trends observed in the past.
- iv. The base value has been taken as the average of actual data of FY 2020-21 & estimated data of FY 2020-21 based on the trends witnessed till FY 2019-20 to factor in the impact of Covid pandemic.
- v. In absence of any definite trend in any particular State/UT, appropriate assumptions have been made to derive future growth trends.
- vi. Based on the above methodologies, the State/UT wise and year wise forecast of CPPs' self-consumption of electrical energy (excluding CPPs associated with Green Hydrogen Production) has been done first.
- vii. Thereafter, energy requirement estimated for producing green hydrogen production has been added.
- viii. Under the proposed "National Hydrogen Mission", the total green hydrogen production of the country is assumed as 10 MMT by 2030. The 1/2<sup>th</sup> of the total energy required for producing green hydrogen is expected to meet through remote mode and its impact has been factored in while projecting electricity demand of the Discoms/States (Pls see **Para 1.5.4**). The remaining other half of electric energy requirement are expected to meet through co-location mode and therefore, such requirements have been considered under CPP consumption. The apportionment of all India energy requirement among different States/UTs have been done in the ratio of their respective HT Industrial consumptions.

The summary of self-consumption of electrical energy from CPPs is given in **Table 7.3** below.

Table 7.3 Self Consumption Forecast of CPPs

CPPs	Year			CAGR (in %)	
	2021-22	2026-27	2031-32	2021-22 to	2026-27 to
				2026-27	2031-32
Self-Electrical Energy of CPPs (in MU)	2,03,767	3,68,549	6,01,660	12.58	10.30

The State/UT wise and year wise forecast of CPPs' self-consumption of electrical energy is given in **Table 7.5**.

## 7.2 Solar Roof Top

The assumptions and methodologies adopted for estimating impact on the power demand from the grid due to increasing share of solar roof tops in the energy mix is given in **para 1.5.2**. As per methodology adopted, the energy off set from grid on account of self-consumption from the Solar roof tops is assumed as 75% of the total energy generated. The year wise and State/UT wise forecast of self-consumed energy from solar roof tops is given in **Table 7.6**.

## 7.3 Power Demand Forecast inclusive of CPP & Solar Roof Top

The summary of electrical energy requirement & peak demand of the country inclusive of CPPs and Solar Roof Top is given in **Table 7.4** below. The peak demand assessment is based on the assumption that the State/UT wise load factor will remain same after including CPPs & Solar Roof Top self-consumptions also.

Table 7.4 Power Demand of the country including CPPs &amp; Solar Roof Top Self Consumptions

CPPs	Year			CAGR (in %)	
	2021-22	2026-27	2031-32	2021-22 to	2026-27 to
				2026-27	2031-32
Energy Requirement - Ex Bus (in MU)	15,91,467	22,93,976	31,31,281	7.59	6.42
Peak Demand - Ex Bus (in MW)	2,33,961	3,33,305	4,63,776	7.33	6.83

The year wise and State/UT wise electrical energy requirement & peak demand of the country inclusive of CPPs and Solar Roof Top is given in **Table 7.7** & **Table 7.8**.

Table 7.5 – CPPs Self Consumption Forecast in MU

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	3	3	5	8	12	16	21	27	35	35	36
Delhi	1	1	37	134	256	393	550	721	997	997	997
Haryana	3627	3894	4483	5615	6968	8474	10168	12000	14752	15162	15591
Himachal Pradesh	138	144	231	458	739	1056	1419	1813	2446	2453	2459
J&K	4	4	20	63	116	177	247	322	445	445	445
Ladakh	0	0	0	0	0	0	0	0	0	0	0
Punjab	2798	3008	3552	4661	5999	7493	9181	11008	13796	14123	14466
Rajasthan	10489	11252	12539	14695	17218	20003	23105	26444	31247	32408	33624
Uttar Pradesh	11970	12248	12969	14457	16239	18212	20426	22806	26499	26712	26914
Uttarakhand	909	954	1106	1441	1848	2303	2818	3375	4245	4298	4352
<b>Northern Region</b>	<b>29938</b>	<b>31507</b>	<b>34939</b>	<b>41532</b>	<b>49394</b>	<b>58128</b>	<b>67934</b>	<b>78517</b>	<b>94463</b>	<b>96633</b>	<b>98886</b>
Chhattisgarh	26672	28779	31859	36521	41891	47789	54314	61335	70991	74381	77960
Dadar Nagar Haveli	24	26	114	354	651	988	1373	1792	2468	2470	2472
Daman & Diu	1	1	28	102	194	299	418	548	759	759	759
Goa	526	565	640	777	938	1118	1319	1536	1855	1916	1979
Gujarat	22897	24325	27079	32073	37974	44503	51801	59659	71301	73267	75302
Madhya Pradesh	13729	14727	16341	18980	22054	25441	29205	33254	39021	40536	42123
Maharashtra	8391	8877	10093	12550	15500	18785	22484	26478	32581	33223	33883
<b>Western Region</b>	<b>72240</b>	<b>77299</b>	<b>86155</b>	<b>101357</b>	<b>119203</b>	<b>138922</b>	<b>160914</b>	<b>184601</b>	<b>218976</b>	<b>226551</b>	<b>234479</b>
Andhra Pradesh	8291	8535	9237	10730	12526	14525	16775	19200	22974	23192	23404
Karnataka	12514	13337	14586	16539	18791	21258	23983	26902	30999	32172	33391
Kerala	1244	1333	1500	1797	2147	2535	2969	3437	4124	4259	4401
Lakshadweep	0	0	0	0	0	0	0	0	1	1	1
Puducherry	167	171	190	233	285	344	410	482	596	599	603
Tamil Nadu	8047	8498	9273	10594	12136	13832	15714	17733	20671	21254	21851
Telangana	3079	3273	3741	4675	5795	7042	8445	9962	12268	12537	12816
<b>Southern Region</b>	<b>33342</b>	<b>35148</b>	<b>38528</b>	<b>44567</b>	<b>51681</b>	<b>59535</b>	<b>68296</b>	<b>77715</b>	<b>91633</b>	<b>94014</b>	<b>96466</b>
A&N	0	0	0	0	0	0	0	0	0	0	0
Bihar	517	548	641	841	1082	1352	1657	1986	2497	2539	2582
DVC	0	0	241	896	1711	2634	3690	4840	6699	6699	6699
Jharkhand	6906	7279	7879	8862	10000	11246	12624	14097	16213	16685	17167
Odisha	55310	58286	62645	69314	76937	85229	94329	104024	117585	121337	125174
Sikkim	0	0	4	16	31	48	68	89	123	123	123
West Bengal	4110	4414	5044	6222	7624	9183	10934	12826	15645	16113	16604
<b>Eastern Region</b>	<b>66843</b>	<b>70527</b>	<b>76454</b>	<b>86150</b>	<b>97386</b>	<b>109692</b>	<b>123302</b>	<b>137862</b>	<b>158762</b>	<b>163494</b>	<b>168348</b>
AP	0	0	3	10	19	29	41	54	74	74	74
Assam	1336	1379	1468	1634	1831	2048	2290	2549	2942	2982	3022
Manipur	0	0	0	1	1	2	3	4	5	5	5
Meghalaya	68	69	81	110	146	186	232	282	362	363	364
Mizoram	0	0	0	1	2	3	5	6	8	8	8
Nagaland	0	0	0	0	0	0	0	0	0	0	0
Tripura	0	0	0	1	2	3	4	5	7	7	7
<b>North Eastern Region</b>	<b>1404</b>	<b>1448</b>	<b>1552</b>	<b>1757</b>	<b>2002</b>	<b>2272</b>	<b>2575</b>	<b>2900</b>	<b>3399</b>	<b>3440</b>	<b>3481</b>
<b>All India</b>	<b>203767</b>	<b>215930</b>	<b>237629</b>	<b>275364</b>	<b>319666</b>	<b>368549</b>	<b>423022</b>	<b>481596</b>	<b>567233</b>	<b>584132</b>	<b>601660</b>

**Table 7.6 – Solar Roof Top Self Consumption Forecast (in MU)**

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	48	56	65	76	89	103	120	140	163	190	221
Delhi	247	296	356	427	513	616	739	887	1065	1279	1536
Haryana	370	410	453	502	555	614	680	752	832	921	1019
Himachal Pradesh	28	37	49	65	87	116	154	206	274	365	486
J&K	48	62	82	107	140	182	239	312	408	534	698
Ladakh	-	-	-	-	-	-	-	-	-	-	-
Punjab	191	215	243	273	308	346	390	439	495	557	628
Rajasthan	558	681	831	1014	1238	1511	1844	2251	2748	3355	4095
Uttar Pradesh	379	491	637	826	1072	1390	1803	2338	3032	3932	5100
Uttarakhand	143	169	199	234	275	323	380	447	526	619	728
<b>Northern Region</b>	<b>2012</b>	<b>2417</b>	<b>2914</b>	<b>3524</b>	<b>4275</b>	<b>5202</b>	<b>6349</b>	<b>7773</b>	<b>9544</b>	<b>11752</b>	<b>14511</b>
Chhattisgarh	45	62	85	116	159	217	297	406	556	760	1040
Dadar Nagar Haveli	5	7	11	17	25	38	56	85	127	190	285
Daman & Diu	39	46	54	64	75	89	105	124	146	173	204
Goa	10	13	18	24	33	44	59	80	108	146	197
Gujarat	1273	1501	1769	2085	2458	2897	3414	4024	4743	5590	6589
Madhya Pradesh	119	165	230	320	446	620	863	1200	1670	2324	3234
Maharashtra	884	1101	1371	1707	2126	2647	3297	4105	5112	6366	7928
<b>Western Region</b>	<b>2375</b>	<b>2896</b>	<b>3538</b>	<b>4333</b>	<b>5321</b>	<b>6551</b>	<b>8091</b>	<b>10025</b>	<b>12462</b>	<b>15550</b>	<b>19477</b>
Andhra Pradesh	201	264	347	456	599	787	1034	1359	1786	2347	3084
Karnataka	366	462	583	736	929	1174	1482	1871	2363	2983	3767
Kerala	146	183	228	285	355	443	553	691	862	1076	1343
Lakshadweep	1	2	2	3	4	4	6	7	9	11	14
Puducherry	13	17	22	28	36	46	59	75	97	124	159
Tamil Nadu	460	570	707	876	1087	1347	1670	2071	2568	3184	3947
Telangana	241	312	403	521	674	871	1126	1456	1883	2435	3148
<b>Southern Region</b>	<b>1428</b>	<b>1809</b>	<b>2292</b>	<b>2905</b>	<b>3683</b>	<b>4672</b>	<b>5930</b>	<b>7530</b>	<b>9567</b>	<b>12159</b>	<b>15462</b>
A&N	6	7	9	10	12	15	18	22	26	31	38
Bihar	33	49	71	103	150	219	319	465	678	988	1440
DVC	-	-	-	-	-	-	-	-	-	-	-
Jharkhand	20	31	46	68	102	153	228	342	511	764	1143
Odisha	30	44	65	95	140	207	305	449	661	974	1434
Sikkim	0	0	0	1	2	3	6	11	20	38	70
West Bengal	80	106	142	188	251	334	445	592	789	1050	1398
<b>Eastern Region</b>	<b>170</b>	<b>237</b>	<b>332</b>	<b>467</b>	<b>658</b>	<b>931</b>	<b>1321</b>	<b>1881</b>	<b>2685</b>	<b>3845</b>	<b>5523</b>
AP	6	8	10	13	17	22	28	37	47	61	79
Assam	44	56	69	87	109	136	170	213	266	333	417
Manipur	9	11	14	17	22	27	34	42	53	66	83
Meghalaya	0	0	1	1	2	4	7	13	22	40	70
Mizoram	2	3	5	6	9	13	18	26	36	51	73
Nagaland	2	2	3	5	7	11	16	23	34	49	72
Tripura	6	8	10	13	17	22	29	37	48	61	79
<b>North Eastern Region</b>	<b>70</b>	<b>88</b>	<b>113</b>	<b>144</b>	<b>183</b>	<b>235</b>	<b>302</b>	<b>391</b>	<b>507</b>	<b>663</b>	<b>873</b>
<b>All India</b>	<b>6054</b>	<b>7447</b>	<b>9188</b>	<b>11372</b>	<b>14120</b>	<b>17592</b>	<b>21994</b>	<b>27599</b>	<b>34765</b>	<b>43969</b>	<b>55845</b>

**Table 7.7 – Electrical Energy Requirement Forecast inclusive of CPPs & Solar Roof Top (in MU)**

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	1657	1796	1853	1911	1969	2030	2095	2164	2245	2332	2414
Delhi	31775	36012	37738	39561	41540	43574	45737	48033	50704	52979	55326
Haryana	59532	67009	71862	77938	84740	92069	99898	108238	118760	124864	131246
Himachal Pradesh	12280	12794	13452	14352	15348	16410	17552	18749	20347	21039	21753
J&K	19376	19634	20913	21552	22056	22867	24186	25547	26985	28217	29437
Ladakh	190	210	233	259	289	321	357	398	444	495	552
Punjab	65840	69687	73480	78428	83878	89798	96107	102806	111528	115741	120022
Rajasthan	100964	113690	125737	134876	144574	155064	166209	177999	192831	201161	209602
Uttar Pradesh	141929	163891	173381	184813	197278	210739	225149	240536	259244	272424	285987
Uttarakhand	16594	17424	18442	19762	21215	22768	24437	26196	28474	29539	30605
<b>Northern Region</b>	<b>450138</b>	<b>502148</b>	<b>537092</b>	<b>573450</b>	<b>612887</b>	<b>655642</b>	<b>701727</b>	<b>750667</b>	<b>811561</b>	<b>848791</b>	<b>886942</b>
Chhattisgarh	58665	65101	70472	77861	86180	95214	105087	115641	129530	135790	142437
Dadar Nagar Haveli	6877	7827	8291	8975	9749	10584	11499	12470	13820	14235	14677
Daman & Diu	2654	2886	3052	3287	3546	3825	4145	4487	4947	5129	5318
Goa	4991	5208	5478	5839	6241	6674	7143	7647	8313	8659	9023
Gujarat	147959	165392	176930	192812	210754	229906	250683	272691	302184	313454	324885
Madhya Pradesh	100370	113755	121172	130724	141251	154905	167178	180116	196462	205400	214211
Maharashtra	182093	193755	202963	214345	227219	241159	255143	269791	289272	298119	306604
<b>Western Region</b>	<b>503609</b>	<b>553923</b>	<b>588358</b>	<b>633842</b>	<b>684940</b>	<b>742267</b>	<b>800878</b>	<b>862844</b>	<b>944528</b>	<b>980786</b>	<b>1017153</b>
Andhra Pradesh	76930	81760	87718	95431	104014	113474	123602	134417	148122	155734	163510
Karnataka	85678	89001	93045	98197	103852	110664	117317	124259	133120	138128	143128
Kerala	28016	29408	30972	32810	34783	36881	39120	41512	44450	46555	48628
Lakshadweep	58	60	62	65	68	71	74	78	82	86	91
Puducherry	3087	3236	3347	3495	3652	3826	4008	4205	4468	4594	4709
Tamil Nadu	118422	124856	132083	140550	149622	159265	169459	180233	193245	202540	211905
Telangana	74191	76814	81647	87511	93882	100880	108149	115801	125122	130834	136513
<b>Southern Region</b>	<b>386382</b>	<b>405135</b>	<b>428874</b>	<b>458059</b>	<b>489875</b>	<b>525061</b>	<b>561728</b>	<b>600505</b>	<b>648609</b>	<b>678472</b>	<b>708484</b>
A&N	344	352	359	367	375	383	391	399	409	421	432
Bihar	36790	42411	46272	50382	55153	59827	64847	70167	76416	81682	86897
DVC	16630	17624	18998	20996	23261	25721	28412	31278	35181	36524	37910
Jharkhand	25281	26643	28601	31042	33948	36862	39992	43311	47821	49933	52109
Odisha	93683	101389	106292	114394	123766	134062	145444	157652	174562	180201	185895
Sikkim	616	652	694	747	806	870	941	1018	1117	1192	1286
West Bengal	58210	64684	68749	73928	79695	85869	92561	99436	108205	112762	117445
<b>Eastern Region</b>	<b>231554</b>	<b>253755</b>	<b>269965</b>	<b>291856</b>	<b>317004</b>	<b>343594</b>	<b>372586</b>	<b>403262</b>	<b>443711</b>	<b>462714</b>	<b>481974</b>
AP	881	924	977	1035	1100	1169	1239	1317	1410	1482	1550
Assam	12250	13407	14216	15175	16219	17336	18540	19832	21391	22546	23724
Manipur	1038	1100	1166	1236	1312	1392	1478	1568	1669	1775	1883
Meghalaya	2332	2419	2519	2638	2767	2901	3044	3193	3377	3470	3568
Mizoram	825	900	983	1071	1167	1268	1380	1495	1621	1751	1897
Nagaland	869	911	956	1002	1048	1098	1149	1205	1261	1321	1371
Tripura	1591	1671	1924	2005	2092	2247	2339	2433	2536	2639	2734
<b>North Eastern Region</b>	<b>19785</b>	<b>21333</b>	<b>22740</b>	<b>24162</b>	<b>25706</b>	<b>27411</b>	<b>29170</b>	<b>31043</b>	<b>33266</b>	<b>34983</b>	<b>36728</b>
<b>All India</b>	<b>1591467</b>	<b>1736295</b>	<b>1847030</b>	<b>1981370</b>	<b>2130412</b>	<b>2293976</b>	<b>2466088</b>	<b>2648320</b>	<b>2881674</b>	<b>3005746</b>	<b>3131281</b>

**Table 7.8 – Peak Demand Forecast inclusive of CPPs & Solar Roof Top (in MW)**

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	458	466	484	503	522	541	562	582	606	630	653
Delhi	7586	8046	8472	8929	9420	9945	10512	11123	11824	12464	13153
Haryana	13313	13984	14884	16002	17220	18548	19951	21433	23255	24253	25357
Himachal Pradesh	2092	2182	2296	2452	2625	2810	3009	3217	3495	3618	3744
J&K	3080	3159	3368	3477	3567	3710	3941	4193	4453	4697	4936
Ladakh	61	65	70	74	80	85	91	98	105	112	120
Punjab	14466	15300	15958	16850	17829	18887	20004	21179	22741	23363	23985
Rajasthan	17959	18421	20278	21717	23238	24882	26624	28462	30776	32061	33361
Uttar Pradesh	27860	28724	30408	32439	34655	37051	39618	42361	45695	48063	50505
Uttarakhand	2688	2832	3003	3231	3475	3738	4020	4318	4703	4889	5076
<b>Northern Region</b>	<b>78972</b>	<b>83401</b>	<b>88957</b>	<b>94914</b>	<b>101351</b>	<b>108365</b>	<b>115922</b>	<b>123964</b>	<b>133906</b>	<b>140013</b>	<b>146252</b>
Chhattisgarh	9324	9712	10542	11695	12998	14420	15981	17658	19861	20907	22021
Dadar Nagar Haveli	926	1059	1127	1226	1337	1456	1588	1728	1923	1988	2057
Daman & Diu	391	426	451	486	525	567	616	668	737	766	796
Goa	812	859	913	978	1049	1126	1207	1294	1409	1470	1534
Gujarat	23459	25760	27433	29779	32394	35211	38258	41476	45781	47357	48940
Madhya Pradesh	18823	19921	21077	22587	24245	26425	28331	30323	32861	34132	35365
Maharashtra	29896	32173	33725	35716	37862	40337	42827	45457	48841	50532	52202
<b>Western Region</b>	<b>76819</b>	<b>82976</b>	<b>88141</b>	<b>94973</b>	<b>102648</b>	<b>111263</b>	<b>120090</b>	<b>129443</b>	<b>141793</b>	<b>147354</b>	<b>152954</b>
Andhra Pradesh	14228	15088	16140	17505	19019	20683	22455	24339	26725	28012	29321
Karnataka	17615	17992	18840	19919	21097	22527	23930	25397	27257	28346	29439
Kerala	4718	4946	5201	5501	5824	6166	6530	6919	7398	7737	8070
Lakshadweep	11	12	12	13	13	14	15	15	16	17	18
Puducherry	516	547	566	592	618	648	679	713	758	779	799
Tamil Nadu	18456	18977	20106	21427	22845	24355	25953	27645	29687	31163	32653
Telangana	15020	15568	16745	18160	19716	21449	23283	25251	27635	29303	31015
<b>Southern Region</b>	<b>67213</b>	<b>69790</b>	<b>74206</b>	<b>79613</b>	<b>85527</b>	<b>92131</b>	<b>99040</b>	<b>106388</b>	<b>115454</b>	<b>121373</b>	<b>127384</b>
A&N	61	63	64	66	68	70	72	74	77	79	82
Bihar	7169	7754	8478	9260	10165	11054	12010	13027	14218	15218	16213
DVC	3081	3248	3494	3854	4261	4702	5183	5695	6393	6624	6862
Jharkhand	3924	4145	4396	4743	5116	5540	5993	6477	7104	7414	7740
Odisha	13888	15386	16293	17712	19357	21179	23209	25411	28421	29636	30881
Sikkim	136	144	154	166	179	193	209	227	249	267	288
West Bengal	9844	10967	11659	12540	13520	14570	15708	16881	18376	19162	19970
<b>Eastern Region</b>	<b>36649</b>	<b>39850</b>	<b>42594</b>	<b>46278</b>	<b>50465</b>	<b>54960</b>	<b>59873</b>	<b>65108</b>	<b>71921</b>	<b>75360</b>	<b>78874</b>
AP	174	185	196	209	223	238	253	269	289	304	319
Assam	2452	2709	2883	3087	3308	3546	3803	4079	4411	4660	4914
Manipur	268	285	301	319	339	359	381	403	428	454	481
Meghalaya	425	441	460	483	507	532	559	588	623	642	662
Mizoram	161	174	189	204	221	239	259	280	303	326	353
Nagaland	158	166	175	183	192	201	211	221	232	243	253
Tripura	333	361	427	459	493	542	580	621	665	712	762
<b>North Eastern Region</b>	<b>3714</b>	<b>4047</b>	<b>4347</b>	<b>4650</b>	<b>4979</b>	<b>5344</b>	<b>5724</b>	<b>6130</b>	<b>6611</b>	<b>6997</b>	<b>7396</b>
<b>All India</b>	<b>233961</b>	<b>249000</b>	<b>265641</b>	<b>285946</b>	<b>308444</b>	<b>333305</b>	<b>359609</b>	<b>387628</b>	<b>423225</b>	<b>443306</b>	<b>463776</b>

## Chapter-8

### Electricity Demand Forecast (Moderate Scenario)

Till now, the details of electricity demand forecast discussed in the report are estimated under optimistic scenario which is based on the complete achievement of targets set by the government for various planned initiatives having potential to impact power demand of the country such as National Hydrogen Mission.

In this chapter, the forecast of electricity demand incident on the utility system under a moderate scenario is given which is based on lesser realization of the government targets in view of constraints that may appear due to unpredictability associated with real life. Under this scenario, the following have been considered:

- i. The electric vehicle sales are assumed to be 20% of total vehicle sales by 2030.
- ii. Total green hydrogen production of the country is assumed to be 5 MMT by 2030 and it has also been assumed that the electrical energy required for producing only 1/2 of this 5 MMT target could be reflected on the grid. The other half energy requirement could be met through CPPs.
- iii. The additional energy requirements projected by the Discoms due to planned upcoming projects have also been appropriately moderated.
- iv. The peak demand forecast has been estimated on a flatter reduction in the load factor trajectory on account of better Demand Side Management.

Besides the aforementioned deviations, the methodologies and all other assumptions are same as stated in chapter 1.

#### Overview of Electricity Demand Forecast under Moderate Scenario

The electrical energy consumption, T&D losses, electrical energy requirement, peak electricity demand and load factor for the years 2021- 22, 2026-27 and 2031-32 on all India basis are summarized in Table 8.1.

Table 8.1 - Electrical energy consumption, T&D losses, electrical energy requirement and peak electricity demand for the years 2021-22, 2026-27 and 2031-32 on all-India basis under a moderate scenario

Particulars	Year			CAGR (in %)	
	2021-22	2026-27	2031-32	2021-22 to	2026-27 to
				2026-27	2031-32
Total Energy Consumption - MU	11,38,408	15,60,348	19,81,126	6.51	4.89
T&D losses –MU	2,43,237	2,88,333	3,15,453		
T&D losses (Ex- Bus) - %	17.60	15.60	13.74		
Energy Requirement (Ex-Bus) - MU	13,81,646	18,48,682	22,96,580	6.00	4.43
Annual Load Factor - %	77.65	79.84	79.78		
Peak Demand (Ex-Bus) – MW	2,03,115	2,64,329	3,28,592	5.41	4.45

The long term electricity demand projection for the years 2036-37 & 2041-42 on all India basis are summarized in Table 8.2.

Table 8.2: Long term electricity demand projection for the years 2031-32, 2036-37 & 2041-42 on all-India basis under a moderate scenario

Particulars	Year			CAGR (in %)	
	2031-32	2036-37	2041-42	2031-32 to	2036-37 to
				2036-37	2041-42
Total Energy Consumption - MU	19,81,126	24,90,394	30,30,473	4.68	4.00
T&D losses –MU	3,15,453	3,06,092	3,12,093		
T&D losses (Ex- Bus) - %	13.74	10.95	9.34		
Energy Requirement (Ex-Bus) - MU	22,96,580	27,96,487	33,42,566	4.02	3.63
Annual Load Factor - %	79.78	78.84	78.21		
Peak Demand (Ex-Bus) – MW	3,28,592	4,04,928	4,87,867	4.27	3.80

Electrical energy requirement and peak electricity demand for the years 2021-22 to 2041-42 are summarized in Table 8.3. CAGR of electrical energy requirement and peak electricity demand is summarized in Table 8.4.

Table 8.3: Electrical Energy Requirement and Peak Electricity Demand from the year 2021-22 to 2041-42 on all-India basis under a moderate scenario

Year	Energy Requirement	Peak Demand
	(MU)	(MW)
2021-22	13,81,646	2,03,115
2026-27	18,48,682	2,64,329
2031-32	22,96,580	3,28,592
2036-37	27,96,487	4,04,928
2041-42	33,42,566	4,87,867

Table 8.4: CAGR of Electrical Energy Requirement and Peak Electricity Demand from the year 2021-22 to 2041-42 on all-India basis under a moderate scenario

Year	Growth in Energy Requirement	CAGR of Energy Requirement	Growth in Peak Demand	CAGR of Peak Demand
	(MU)	(%)	(MW)	(%)
2021-22 to 2026-27	4,67,036	6.00	61,214	5.41
2026-27 to 2031-32	4,47,898	4.43	64,263	4.45
2031-32 to 2036-37	4,99,907	4.02	76,336	4.27
2036-37 to 2041-42	5,46,079	3.63	82,939	3.80

State/UT-wise details of electrical energy requirement (ex-bus) and peak electricity demand for the years 2021-22, 2026-27, 2031-32, 2036-37 & 2041-42 are given in Table 8.5 and Table 8.6 respectively. The year wise and state/UT-wise details of electrical energy requirement (ex-bus) and peak electricity demand for the period of 2021-22 to 2031-32 are given in Table 8.7 and Table 8.8 respectively.

\*\*\*\*\*

Table 8.5: State/UT wise **Electrical Energy Requirement (MU)** at Power Station Bus Bar (Utilities) under a moderate scenario

State	2021-22	2026-27	2031-32	2036-37	2041-42
Chandigarh	1,606	1,903	2,081	2,274	2,483
Delhi	31,527	41,279	48,187	56,058	64,997
Haryana	55,535	80,192	1,06,964	1,37,509	1,71,168
Himachal Pradesh	12,115	14,794	17,525	20,556	23,887
J&K	19,324	22,016	26,815	32,431	38,955
Ladakh	190	303	481	684	897
Punjab	62,851	79,428	97,318	1,17,376	1,39,527
Rajasthan	89,918	1,29,797	1,60,729	1,95,363	2,33,454
Uttar Pradesh	1,29,580	1,85,199	2,35,466	2,89,225	3,44,887
Uttarakhand	15,541	19,657	24,044	28,861	34,053
<b>Northern Region</b>	<b>4,18,188</b>	<b>5,74,569</b>	<b>7,19,610</b>	<b>8,80,338</b>	<b>10,54,307</b>
Chhattisgarh	31,948	45,585	58,734	73,475	89,542
Dadar Nagar Haveli	6,848	9,288	11,214	13,499	16,199
Daman & Diu	2,615	3,362	4,149	5,087	6,201
Goa	4,456	5,369	6,325	7,404	8,613
Gujarat	1,23,788	1,73,862	2,20,020	2,70,869	3,25,439
Madhya Pradesh	86,521	1,24,570	1,56,765	1,94,582	2,38,410
Maharashtra	1,72,818	2,13,816	2,46,234	2,81,127	3,18,369
<b>Western Region</b>	<b>4,28,994</b>	<b>5,75,852</b>	<b>7,03,441</b>	<b>8,46,042</b>	<b>10,02,774</b>
Andhra Pradesh	68,438	94,995	1,27,806	1,63,693	2,01,189
Karnataka	72,799	86,162	99,080	1,13,146	1,28,359
Kerala	26,626	33,122	39,580	46,817	54,847
Lakshadweep	56	66	77	88	99
Puducherry	2,907	3,367	3,659	3,972	4,309
Tamil Nadu	1,09,914	1,41,119	1,75,391	2,13,246	2,54,187
Telangana	70,871	89,986	1,13,063	1,39,765	1,70,177
<b>Southern Region</b>	<b>3,51,611</b>	<b>4,48,818</b>	<b>5,58,656</b>	<b>6,80,727</b>	<b>8,13,167</b>
A&N	338	363	370	377	384
Bihar	36,239	56,078	75,629	97,572	1,21,195
DVC	16,630	22,368	29,385	37,930	48,160
Jharkhand	18,355	24,661	31,464	39,297	48,132
Odisha	38,344	46,628	53,547	60,948	68,793
Sikkim	616	791	1,010	1,288	1,640
West Bengal	54,020	74,057	92,873	1,14,643	1,39,448
<b>Eastern Region</b>	<b>1,64,542</b>	<b>2,24,945</b>	<b>2,84,278</b>	<b>3,52,053</b>	<b>4,27,753</b>
AP	875	1,102	1,317	1,537	1,760
Assam	10,869	14,912	19,285	24,141	29,372
Manipur	1,029	1,352	1,720	2,094	2,458
Meghalaya	2,264	2,681	2,977	3,304	3,662
Mizoram	823	1,171	1,528	1,927	2,361
Nagaland	867	1,075	1,209	1,356	1,518
Tripura	1,585	2,206	2,560	2,966	3,433
<b>North Eastern Region</b>	<b>18,312</b>	<b>24,498</b>	<b>30,595</b>	<b>37,326</b>	<b>44,565</b>
<b>All India</b>	<b>13,81,646</b>	<b>18,48,682</b>	<b>22,96,580</b>	<b>27,96,487</b>	<b>33,42,566</b>

Table 8.6: State/UT wise **Peak Electricity Demand (in MW)** at Power Station Bus Bar (Utilities) under a moderate scenario

State	2021-22	2026-27	2031-32	2036-37	2041-42
Chandigarh	428	481	533	590	652
Delhi	7,329	9,285	11,549	14,100	16,925
Haryana	12,137	15,993	20,845	26,021	31,324
Himachal Pradesh	2,033	2,496	2,972	3,505	4,094
J&K	3,000	3,518	4,393	5,464	6,769
Ladakh	61	80	105	136	178
Punjab	13,558	16,402	19,094	22,126	25,527
Rajasthan	15,803	20,590	25,306	30,519	36,179
Uttar Pradesh	24,991	31,992	40,851	50,434	60,477
Uttarakhand	2,474	3,212	4,047	5,005	6,083
<b>Northern Region</b>	<b>73,367</b>	<b>94,460</b>	<b>1,17,538</b>	<b>1,44,142</b>	<b>1,72,896</b>
Chhattisgarh	5,029	6,837	8,993	11,549	14,510
Dadar Nagar Haveli	892	1,240	1,535	1,887	2,307
Daman & Diu	373	486	608	758	938
Goa	703	875	1,056	1,268	1,515
Gujarat	19,457	26,432	32,862	40,022	47,839
Madhya Pradesh	15,941	20,873	25,419	30,443	35,907
Maharashtra	28,083	35,232	40,626	46,431	52,622
<b>Western Region</b>	<b>65,437</b>	<b>85,433</b>	<b>1,03,112</b>	<b>1,23,648</b>	<b>1,46,623</b>
Andhra Pradesh	12,563	17,193	22,776	28,733	34,805
Karnataka	14,841	17,594	20,434	23,576	27,029
Kerala	4,390	5,421	6,430	7,569	8,845
Lakshadweep	11	13	15	17	19
Puducherry	473	556	605	653	701
Tamil Nadu	16,899	21,288	26,662	32,009	37,126
Telangana	14,176	19,124	25,719	33,342	41,854
<b>Southern Region</b>	<b>61,165</b>	<b>78,381</b>	<b>99,087</b>	<b>1,22,953</b>	<b>1,46,997</b>
A&N	60	67	74	82	90
Bihar	6,923	10,133	13,711	17,655	21,805
DVC	3,081	4,089	5,318	6,685	8,157
Jharkhand	2,835	3,690	4,650	5,758	7,014
Odisha	5,645	7,316	8,835	10,577	12,558
Sikkim	134	174	223	287	369
West Bengal	9,090	12,507	15,720	19,455	23,731
<b>Eastern Region</b>	<b>26,043</b>	<b>35,630</b>	<b>45,544</b>	<b>57,279</b>	<b>69,869</b>
AP	170	217	260	305	351
Assam	2,138	2,967	3,839	4,822	5,897
Manipur	260	339	426	525	632
Meghalaya	408	486	541	602	669
Mizoram	157	211	258	310	365
Nagaland	155	194	219	248	278
Tripura	329	502	634	776	927
<b>North Eastern Region</b>	<b>3,437</b>	<b>4,670</b>	<b>5,873</b>	<b>7,335</b>	<b>8,824</b>
<b>All India</b>	<b>2,03,115</b>	<b>2,64,329</b>	<b>3,28,592</b>	<b>4,04,928</b>	<b>4,87,867</b>

Table 8.7 – Year Wise and State/UT Wise **Electrical Energy Requirement – Ex Bus (in MU)** under a moderate scenario

State/ UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	1606	1737	1777	1817	1853	1903	1953	1988	2022	2056	2081
Delhi	31527	35715	37108	38470	39893	41279	42677	44078	45546	46896	48187
Haryana	55535	62706	66601	70814	75374	80192	85174	90407	96237	101486	106964
Himachal Pradesh	12115	12614	13126	13675	14234	14794	15353	15900	16470	17004	17525
J&K	19324	19568	20700	21163	21448	22016	23057	24093	25094	25989	26815
Ladakh	190	210	230	252	277	303	333	365	400	438	481
Punjab	62851	66464	69412	72612	75925	79428	82963	86598	90589	93945	97318
Rajasthan	89918	101757	111955	117849	123668	129797	135979	142286	149063	154950	160729
Uttar Pradesh	129580	151152	158848	167196	175952	185199	194745	204652	215264	225358	235466
Uttarakhand	15541	16301	17084	17918	18777	19657	20551	21458	22421	23244	24044
<b>Northern Region</b>	<b>418188</b>	<b>468224</b>	<b>496842</b>	<b>521765</b>	<b>547401</b>	<b>574569</b>	<b>602785</b>	<b>631823</b>	<b>663106</b>	<b>691366</b>	<b>719610</b>
Chhattisgarh	31948	36260	38356	40657	43073	45585	48192	50872	53771	56199	58734
Dadar Nagar Haveli	6848	7794	8140	8512	8896	9288	9689	10094	10531	10876	11214
Daman & Diu	2615	2840	2963	3095	3228	3362	3515	3675	3847	3997	4149
Goa	4456	4630	4802	4988	5178	5369	5561	5754	5955	6141	6325
Gujarat	123788	139566	147252	155692	164702	173862	183336	193038	203998	212048	220020
Madhya Pradesh	86521	98863	104146	109925	115955	124570	131122	137752	144806	151028	156765
Maharashtra	172818	183777	190829	198013	205747	213816	220998	228008	235886	241439	246234
<b>Western Region</b>	<b>428994</b>	<b>473729</b>	<b>496488</b>	<b>520882</b>	<b>546779</b>	<b>575852</b>	<b>602413</b>	<b>629193</b>	<b>658794</b>	<b>681729</b>	<b>703441</b>
Andhra Pradesh	68438	72961	77807	83152	88833	94995	101322	107916	115067	121453	127806
Karnataka	72799	74748	77629	80188	82782	86162	88920	91545	94230	96783	99080
Kerala	26626	27892	29128	30443	31775	33122	34468	35813	37213	38455	39580
Lakshadweep	56	58	60	62	64	66	68	71	73	75	77
Puducherry	2907	3048	3126	3209	3288	3367	3441	3511	3579	3629	3659
Tamil Nadu	109914	115788	121722	128020	134472	141119	147835	154660	161845	168699	175391
Telangana	70871	72521	76447	80736	85184	89986	94712	99505	104518	108906	113063
<b>Southern Region</b>	<b>351611</b>	<b>367016</b>	<b>385919</b>	<b>405810</b>	<b>426398</b>	<b>448818</b>	<b>470766</b>	<b>493020</b>	<b>516525</b>	<b>538001</b>	<b>558656</b>
A&N	338	345	349	354	359	363	365	367	368	369	370
Bihar	36239	41814	45162	48539	52428	56078	59895	63818	68167	72044	75629
DVC	16630	17624	18692	19855	21083	22368	23715	25118	26655	27998	29385
Jharkhand	18355	19334	20590	21831	23322	24661	26013	27379	29020	30281	31464
Odisha	38344	43060	43367	44283	45382	46628	48005	49469	51165	52455	53547
Sikkim	616	651	684	717	753	791	830	872	916	962	1010
West Bengal	54020	60163	63320	66715	70321	74057	77960	81756	85854	89364	92873
<b>Eastern Region</b>	<b>164542</b>	<b>182992</b>	<b>192163</b>	<b>202295</b>	<b>213647</b>	<b>224945</b>	<b>236785</b>	<b>248780</b>	<b>262146</b>	<b>273473</b>	<b>284278</b>
AP	875	916	961	1007	1054	1102	1148	1195	1242	1284	1317
Assam	10869	11972	12644	13367	14124	14912	15734	16590	17496	18391	19285
Manipur	1029	1089	1149	1214	1282	1352	1423	1496	1571	1647	1720
Meghalaya	2264	2350	2431	2515	2599	2681	2760	2834	2900	2943	2977
Mizoram	823	897	962	1029	1099	1171	1245	1318	1389	1456	1528
Nagaland	867	909	950	992	1033	1075	1114	1151	1182	1205	1209
Tripura	1585	1663	1910	1985	2062	2206	2283	2357	2432	2501	2560
<b>North Eastern Region</b>	<b>18312</b>	<b>19796</b>	<b>21007</b>	<b>22108</b>	<b>23252</b>	<b>24498</b>	<b>25707</b>	<b>26941</b>	<b>28214</b>	<b>29427</b>	<b>30595</b>
<b>All India</b>	<b>1381646</b>	<b>1511756</b>	<b>1592417</b>	<b>1672860</b>	<b>1757477</b>	<b>1848682</b>	<b>1938456</b>	<b>2029757</b>	<b>2128784</b>	<b>2213996</b>	<b>2296580</b>

Table 8.8 – Year Wise and State/UT Wise **Peak Electricity Demand – Ex Bus (in MW)** under a moderate scenario

State/UT	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32
Chandigarh	428	435	446	457	467	481	495	505	515	525	533
Delhi	7329	7770	8147	8509	8888	9285	9702	10140	10620	11077	11549
Haryana	12137	12788	13497	14276	15100	15993	16908	17866	18921	19865	20845
Himachal Pradesh	2033	2119	2208	2302	2399	2496	2593	2688	2787	2881	2972
J&K	3000	3075	3263	3350	3410	3518	3705	3899	4079	4243	4393
Ladakh	61	65	69	72	76	80	85	89	94	99	105
Punjab	13558	14327	14800	15316	15845	16402	16954	17515	18136	18618	19094
Rajasthan	15803	16291	17841	18753	19648	20590	21537	22500	23534	24429	25306
Uttar Pradesh	24991	26028	27382	28840	30372	31992	33667	35408	37276	39060	40851
Uttarakhand	2474	2603	2744	2894	3051	3212	3378	3548	3729	3889	4047
<b>Northern Region</b>	<b>73367</b>	<b>77628</b>	<b>82067</b>	<b>86036</b>	<b>90109</b>	<b>94460</b>	<b>98975</b>	<b>103637</b>	<b>108661</b>	<b>113145</b>	<b>117538</b>
Chhattisgarh	5029	5358	5682	6048	6434	6837	7258	7694	8166	8570	8993
Dadar Nagar Haveli	892	1021	1071	1126	1182	1240	1300	1361	1427	1481	1535
Daman & Diu	373	405	424	444	465	486	509	534	561	584	608
Goa	703	740	771	805	839	875	910	946	984	1020	1056
Gujarat	19457	21550	22661	23868	25129	26432	27773	29141	30669	31779	32862
Madhya Pradesh	15941	17009	17797	18658	19550	20873	21825	22777	23786	24648	25419
Maharashtra	28083	30203	31386	32591	33884	35232	36431	37603	38911	39837	40626
<b>Western Region</b>	<b>65437</b>	<b>70833</b>	<b>74130</b>	<b>77590</b>	<b>81342</b>	<b>85433</b>	<b>89147</b>	<b>92876</b>	<b>97088</b>	<b>100209</b>	<b>103112</b>
Andhra Pradesh	12563	13363	14209	15140	16126	17193	18281	19410	20630	21709	22776
Karnataka	14841	15167	15768	16317	16869	17594	18193	18768	19353	19918	20434
Kerala	4390	4592	4789	4997	5208	5421	5633	5844	6064	6257	6430
Lakshadweep	11	12	12	12	13	13	13	14	14	15	15
Puducherry	473	502	515	529	542	556	568	580	591	600	605
Tamil Nadu	16899	17361	18279	19254	20255	21288	22336	23403	24527	25605	26662
Telangana	14176	14663	15647	16729	17872	19124	20391	21708	23110	24421	25719
<b>Southern Region</b>	<b>61165</b>	<b>63392</b>	<b>66826</b>	<b>70456</b>	<b>74227</b>	<b>78381</b>	<b>82461</b>	<b>86622</b>	<b>91026</b>	<b>95114</b>	<b>99087</b>
A&N	60	61	63	64	66	67	68	70	71	73	74
Bihar	6923	7495	8108	8736	9456	10133	10839	11566	12367	13069	13711
DVC	3081	3248	3438	3644	3862	4089	4327	4573	4844	5078	5318
Jharkhand	2835	2994	3150	3320	3499	3690	3882	4077	4292	4475	4650
Odisha	5645	6490	6602	6810	7049	7316	7608	7920	8274	8568	8835
Sikkim	134	141	149	157	165	174	182	192	202	212	223
West Bengal	9090	10150	10685	11261	11873	12507	13170	13817	14516	15118	15720
<b>Eastern Region</b>	<b>26043</b>	<b>28684</b>	<b>30201</b>	<b>31890</b>	<b>33746</b>	<b>35630</b>	<b>37603</b>	<b>39611</b>	<b>41817</b>	<b>43722</b>	<b>45544</b>
AP	170	180	189	198	207	217	226	236	245	253	260
Assam	2138	2376	2511	2656	2808	2967	3131	3303	3484	3662	3839
Manipur	260	276	290	306	322	339	356	373	391	409	426
Meghalaya	408	424	439	455	470	486	500	514	527	535	541
Mizoram	157	170	180	190	200	211	221	231	241	249	258
Nagaland	155	163	170	178	186	194	201	208	214	218	219
Tripura	329	356	415	438	462	502	528	554	582	608	634
<b>North Eastern Region</b>	<b>3437</b>	<b>3748</b>	<b>3985</b>	<b>4201</b>	<b>4425</b>	<b>4670</b>	<b>4908</b>	<b>5150</b>	<b>5401</b>	<b>5641</b>	<b>5873</b>
<b>All India</b>	<b>203115</b>	<b>216263</b>	<b>227707</b>	<b>239184</b>	<b>251293</b>	<b>264329</b>	<b>277184</b>	<b>290292</b>	<b>304544</b>	<b>316795</b>	<b>328592</b>

I/9901/2020

File No.CEA-PL-15-11(11)/1/2020-PSLF Division

1



भारत सरकार  
**Government of India**  
 विद्युत मंत्रालय  
**Ministry of Power**  
 केन्द्रीय विद्युत प्राधिकरण  
**Central Electricity Authority**  
 विद्युत शक्ति सर्वेक्षण और भार पूर्वानुमान प्रभाग  
**Power Survey & Load Forecasting Division**

**OFFICE ORDER / कार्यालय आदेश**

Central Electricity Authority (CEA) conducts Electric Power Survey (EPS) of the country every five years for estimating the electricity demand of the country as obligated under Section 73(a) of the Electricity Act-2003. It covers state/Union territory wise, region wise & all India electricity demand forecast on short, medium and long term. The electricity demand projection done by CEA serves as the basic building block over which the whole power sector planning (i.e. planning of additional generation capacities and commensurate Transmission and Distribution systems) is done. So far 19 EPS exercises have been carried out and the latest in the series i.e. the 19<sup>th</sup> EPS report was published in January 2017.

2. Now, for conducting the next Electric Power Survey of the country, the 20<sup>th</sup> Electric Power Survey Committee (EPSC) is hereby constituted with the following composition:

1.	Chairperson Central Electricity Authority	Chairman
2.	Member (Planning) Central Electricity Authority	Member
3.	Member (GO&D) Central Electricity Authority	Member
4.	Economic Adviser, Department of Economic Affairs, Ministry of Finance	Member
5.	Adviser (Power) NITI AAYOG	Member
6.	Director General Bureau of Energy Efficiency	Member
7.	Adviser (RE) Railway Board	Member

I/9901/2020

8.	A Representative of Department of Industrial Policy & Promotion , Ministry of Commerce & Industry not below the rank of Joint Secretary	Member
9.	A Representative of Ministry of New & Renewable Energy, Ministry of Commerce & Industry not below the rank of Joint Secretary	Member
10.	Adviser (Projects) Ministry of Coal	Member
11.	Economic Adviser (PP) Ministry of Power	Member
12.	Commissioner (B&B) Ministry of Water Resources	Member
13.	Chairman Damodar Valley Corporation	Member
14.	Director General National Council of Applied Economic Research (NCAER)	Member
15.	Heads of States Power Transmission Corporations	Member
16.	Chairman & Managing Director Power Grid Corporation of India Limited	Member
17.	Chairman & Managing Director NTPC Ltd.	Member
18.	Chairman & Managing Director Rural Electrification Corporation Ltd.	Member
19.	Chairman Bhakra Beas Management Board.	Member
20.	Chairman & Managing Director NHPC Ltd.	Member
21.	President The Energy and Research Institute (TERI)	Member
22.	Member Confederation of Indian Industry (CII)	Member
23.	Executive Director (Cooperate Services System Operation) CESC Limited	Member
24.	Managing Director Tata Power Company Limited	Member
25.	Vice Chairman Reliance Infrastructure Ltd.	Member
26.	Chief Executive Officer Adani Power Limited	Member

27.	Vice Chairman Torrent (Group) Limited	Member
28.	President FICCI Federation House	Member
29.	Member Secretary National Capital Region Planning Board	Member
30.	Executive Director Northern Regional Load Dispatch Centre	Member
31.	Member Secretary National Regional Power Committee	Member
32.	Chief Engineer (Power Survey & Load Forecasting) Central Electricity Authority	Member Secretary

Also, the committee may suitably co-opt any representative of any Utilities/Stakeholders as special invitees if needs arises.

3. Terms of reference of the Committee will be:
  - i. To finalize the methodology of load forecast.
  - ii. To forecast the year wise electricity demand projection for each State, Union Territory, Region and All India in detail for the years 2021-22 to 2031-32.
  - iii. To project the electricity demand for terminal year 2036-37 & 2041-42.
4. The committee will submit its report in a period of 15 months.

**(पी.सी. कुरील / P. C. Kureel)**  
**सचिव, के.वि.प्रा. / Secretary, CEA**

I/13816/2021

File No.CEA-PL-15-11(11)/1/2020-PSLF Division-Part(2)

1/6



CEA-PL-15-11(11)/1/2020-PSLF Division  
Government of India  
Ministry of Power  
Central Electricity Authority  
(Power Survey & Load Forecasting Division)

Sewa Bhawan, New Delhi,  
Dated 09<sup>th</sup> Feb, 2021

**Order**

**Subject: Constitution of Sub-committee for finalizing methodology for factoring in impacts of Covid-19 on demand forecast-regarding.**

As decided in the first meetings of 20th EPS Committee held on 26.11.2020 & 04.12.2020, a Sub-Committee with the following composition is , hereby , constituted for finalizing methodology for factoring in impacts of Covid-19 on electricity demand forecast -

- (i) Chief Engineer (PS&LF) – Chairman
- (ii) A representative from GM Division, CEA
- (iii) A representative from IRP Division, CEA
- (iv) A representative from NITI Aayog
- (v) A representative from TERI
- (vi) A representative from POSOCO

2. The sub-committee may co-opt members from other Ministries/ Organisations as per requirement and may submit its recommendations within two months.

Signature Not Verified  
Digitally signed by KRISHNA NAND PAL  
Date: 2021.02.09 14:30:28 IST

(Krishna Nand Pal)  
Deputy Director (Power Survey & Load Forecasting)

I/13821/2021

File No.CEA-PL-15-11(11)/1/2020-PSLF Division-Part(2)

7



CEA-PL-15-11(11)/1/2020-PSLF Division  
 Government of India  
 Ministry of Power  
 Central Electricity Authority  
 (Power Survey & Load Forecasting Division)

Sewa Bhawan, New Delhi,  
 Dated 09<sup>th</sup> Feb, 2021

**Order**

**Subject: Constitution of Sub-committee for finalizing the methodology for factoring in impacts of increasing share of renewable energy sources in the energy mix on electricity demand forecast-regarding.**

As decided in the first meetings of 20<sup>th</sup> EPS Committee held on 26.11.2020 & 04.12.2020, a Sub-Committee with the following composition is, hereby, constituted for factoring in impacts on electricity demand forecast because of increasing share of renewable energy sources in the energy mix:

- (i) Chief Engineer (PS&LF) – Chairman
- (ii) A Representative from RPM Division, CEA
- (iii) A Representative from RTI Division, CEA
- (iv) A representative from Ministry of Jal Shakti
- (v) A Representative from MNRE
- (vi) A Representative from TANGEDCO
- (vii) A Representative from KPTCL
- (viii) A Representative from RVPNL
- (ix) A representative from HVPNL
- (x) A representative from OPTCL

2. The sub-committee may co-opt members from other Ministries/ Organisations as per requirement and may submit its recommendations within two months.

(Krishna Nand Pal)  
 Deputy Director (Power Survey & Load  
 Forecasting)

I/13822/2021

File No.CEA-PL-15-11(11)/1/2020-PSLF Division-Part(2)

9



CEA-PL-15-11(11)/1/2020-PSLF Division  
Government of India  
Ministry of Power  
Central Electricity Authority  
(Power Survey & Load Forecasting Division)

Sewa Bhawan, New Delhi,  
Dated 09<sup>th</sup> Feb, 2021

**Order**

**Subject: Constitution of Sub-committee for finalizing the methodology for forecasting peak demand-regarding.**

As decided in the first meetings of 20th EPS Committee held on 26.11.2020 & 04.12.2020, a Sub-Committee with the following composition is, hereby, constituted for finalizing the methodology for forecasting peak demand -

- (i) Chief Engineer (PS&LF) – Chairman
- (ii) A representative from GM Division, CEA
- (iii) A representative from TERI
- (iv) A representative from NTPC
- (v) A Representative from TATA Power
- (vi) A representative from POSOCO
- (vii) A representative from MPPMCL
- (viii) A representative from OPTCL
- (ix) A representative from AEGCL
- (x) A representative from KSEBL

2. The sub-committee may co-opt members from other Ministries/ Organisations as per requirement and may submit its recommendations within two months.

(Krishna Nand Pal)  
Deputy Director (Power Survey & Load Forecasting)

योजना स्कंध  
Planning Wing  
विद्युत शक्ति सर्वेक्षण और भार पूर्वानुमान प्रभाग  
Power Survey & Load Forecasting Division